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C. B. Martin's 'Limit View', Distinctions of Reason and the Metaphysics of Mind

Alexander Daniel Carruth

Abstract:

This thesis is concerned with the 'Limit View' account of the nature of properties, first advanced by C. B. Martin, which holds that all real properties contribute to both the dispositional and the qualitative natures of the objects by which they are instantiated. According to the Limit View, the dispositional is identical to the qualitative, and both are identical to a single, unitary property. This distinctive position in the debate concerning the relative status of dispositional and categorical/qualitative properties has been charged with obscurity. This charge arises, in part, due to the manner in which Martin presented the view, and in part due to its standing in stark contrast to orthodox positions in the debate.

In order to meet this charge, the aims of the first half of this thesis are threefold: first, to present a clear and thorough examination of the development and content of the Limit View as presented by Martin; second, to examine the Limit View in light of criticisms levelled against it and to defend it from such criticism; and, third, to present a viable and consistent, critical interpretation of the Limit View.

Following this, the interpretation of the Limit View advanced in the first half of the thesis is applied to the debate concerning the ontology of mind and body. New responses to the Argument from Conceivability and the Knowledge Argument are developed; and what it means to characterise an entity as 'physical' or 'mental' is investigated. Based on the findings of this investigation, I argue that, if one accepts the Limit View, the position one should adopt concerning the ontology of mind and body is a new variant of neutral monism, which is outlined and distinguished from other positions in the debate in the final chapter of this thesis.

C. B. Martin's 'Limit View', Distinctions of Reason and the Metaphysics of Mind

Alexander Daniel Carruth

Thesis is submitted for the degree of Doctor of Philosophy

Department of Philosophy
Durham University

2013

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Chapter One: Introduction

Charles Burton Martin made significant contributions to the development of the field of contemporary metaphysics throughout his more than fifty year long career, although the majority of his publications did not appear until later in his life. His work has contributed to debates concerning emergentism; causation; truthmaker theory (which he is held to have originated, see, for instance Crane (in Crane, ed., 1996 p.15)) and ontology, especially regarding the nature of properties. One of Martin's most striking claims is that all real properties are properly characterised as *both* dispositional *and* categorical (or qualitative).¹ It is this position with which this thesis is primarily concerned. This position Martin at one time dubbed the 'Limit View', although he later regretted this name as he saw it to be potentially misleading with regard to how we should interpret this claim (for instance, Martin (1997, p.216)).² As will become apparent as this chapter progresses, the Limit View represents a significant and revolutionary departure from traditional approaches to the question of whether properties are fundamentally dispositional or categorical. Until recently, the Limit View has remained a little-discussed position in the debate concerning whether properties are best characterised as dispositions or categorical properties. Some commentators have been led to suggest the view is unintelligible or hopelessly obscure (see Armstrong (2005, p.315) or Lowe (2006, p.134) and section 4.4 of this thesis).

Despite the significance of Martin's contributions, there is something of a scholarly gap surrounding much of Martin's work, especially concerning exactly how the Limit View is to be understood.³ This situation is exacerbated because the manner in which Martin presents the Limit View shifted and developed over the course of the almost twenty-five year period during which he published on the subject (the earliest statement of the Limit View appears in an endnote in Martin (1984)). A combination of these shifts and the

¹ Paul Snowdon says of Martin "[...]he also developed profound views about causation, opposing the dominant regularity theory, more or less before anyone else, and regarding the notion of causation as central to our psychological concepts, again before virtually everyone else." (2008)

² However, the name has stuck, and I shall employ it in this thesis with the caveat that it should not be taken to have any consequence for how the theory is to be interpreted or understood.

³ John Heil has adopted this view and worked with Martin on its development towards the end of Martin's career. Arguably much of the attention Martin's philosophy has attracted is in large part due to the efforts of Heil—he published a collection of essays honouring Martin (1989); published with him towards the end of his career (1998) and (1999) and was instrumental in the editing and publication of *The Mind in Nature* (Martin, 2008), his final publication and only book exploring his metaphysics.

sometimes difficult and demanding style with which Martin writes have led, I argue in Chapter Four of this thesis, both to many mis-readings of the Limit View and also to the charge of (metaphysical) obscurity which is levelled at Martin by Lowe and Armstrong.⁴ Unless Martin's position is to be consigned to the landfill of both historically and metaphysically obscure theories, a detailed critical analysis of the thesis is required, as is a sustained and sophisticated defence of the position against the criticisms which have been raised against it. Such an analysis and defence is called for, as the Limit View not only represents a significant contribution to the debate on the fundamental ontology of properties, but also has the potential to impact on many areas of debate in contemporary philosophy; most notably in the philosophy of mind. Thus, the aims of this thesis are fourfold:

- (1) to make some inroads into closing the scholarly gap concerning Martin's work through an examination of both the development and content of the Limit View;
- (2) to examine the Limit View in light of criticism levelled against it and to defend it from such criticism;
- (3) to present a viable and consistent critical interpretation of the Limit View;
- (4) to examine the application of the Limit View to the debate concerning the ontology of mind and body.

It is not my intention in this thesis to establish that the Limit View represents the only viable position in the categorical/dispositional debate, nor even to argue that it is the single most appealing or plausible position. Rather, my ambitions are more modest. In the first half of this thesis I aim to show that the Limit View is reasonable, plausible and on at least an equal footing with other positions in the debate. In the second half of the thesis, I examine how adopting the Limit View account of properties equips one to tackle questions concerning the ontology of mind and body. I argue that adopting the Limit View allows one to respond to powerful arguments given in favour of property dualism. However, I suggest that this does not mean that the proponent of the Limit View must be a physicalist; rather, I sketch a new version of neutral monism which I argue is the most natural position for a proponent of the Limit View to occupy in the mind-body debate.

⁴ “[...]he is compelled to say that every particular property or trope is at once dispositional and categorical (or qualitative) in nature. But, as I say, I do not really understand what this could *mean*.” (2006, p.134)

1.1 Debates Concerning Properties

One of the background assumptions of this thesis is that there are properties, and that properties number amongst the ontological fundamentals (a thesis concerning the ontology of properties that did not operate under this assumption would be deeply conflicted!). It will not be a concern of this thesis to explicitly address the question 'what are properties?', where this question is taken to bring the very being of properties themselves into question. I take properties, broadly speaking, to be ways things are.⁵ For instance, being round is a way something, perhaps a piece of wood, can be, as is being solid.⁶ Importantly, when two ways of being differ, they are different properties (or different property-complexes). As a starting point of giving an account of property, I take this position to be relatively uncontroversial. However, there is much controversy regarding the nature of properties. Philosophers lock horns over whether properties are abundant—that is, that at least for every meaningful predicate there is a corresponding property—or are sparse—that is, that there are fewer properties than meaningful predicates (see Lewis (1983b)); whether they are universals—entities that can be multiply instantiated in numerically distinct cases—or particulars—singular entities that are non-repeatable but may resemble each other to various degrees (see Armstrong (1989) and Campbell (1990)); and whether fundamentally properties are dispositions or qualities/categorical properties.⁷ It is with this final debate that this thesis is concerned. This section offers an overview of the major positions in that debate: categoricalism, strong dispositionalism and weak dispositionalism. It will not be a concern of this section to argue for or against any of these positions, or to offer an in depth analysis of their relative merits, rather, its aim is to set the stage for the examination of Martin's Limit View of properties which is critical of *all* these accounts.

How something will behave (or fail to behave) given certain situations or circumstances is intimately connected with some of the ways that that thing is. These ways of being are most commonly referred to as 'dispositions'. The terms 'capacity', 'tendency'

⁵ Whilst all properties are ways things are, it is plausible that not all the ways things are are properties: the relation between these two may not be symmetrical.

⁶ I do not mean to commit myself to realism about 'roundness' or 'solidness' as properties here, these are just simple examples.

⁷ And this is not an exhaustive list of the puzzles raised by properties!

and 'power' may also be used to refer to these sorts of properties.⁸ Whilst there may be subtle differences between the proper application of these various terms, and the details of these differences are doubtless pertinent to certain philosophical projects, I shall not be exploring them in this thesis (see Bird (2013) for an interesting argument in favour of distinguishing 'powers' from 'dispositions'). Paradigm examples of dispositions tend to include ascriptions such as 'fragility' and 'solubility'. When we describe a vase as fragile, we are saying that one of the ways the vase is is such that in certain circumstances there are things it will and will not do. For instance, should the vase be struck with a hammer, it will shatter into several pieces. Describing an aspirin tablet as soluble involves *some* commitment to the claim that should the tablet be placed in a suitable, unsaturated solvent (in the case of aspirin, say, a glass of water) it will, or is likely to, dissolve and bring the solvent closer to saturation. As shall be seen below, philosophers disagree on how to analyse these sorts of claims about things and the ways they are.

1.2 Reducing Dispositions

As discussed above, the ascription of a disposition to a thing is intimately related with notions of how that thing will behave or fail to behave in certain situations. This has led many philosophers to consider dispositions as intimately related to conditionals of the following sort:

(1.i) If the vase is fragile, then the vase would shatter were it to be struck with a hammer;

(1.ii) If the aspirin tablet is soluble, then the tablet would dissolve were it to be placed in water;

or more generally:

(1.iii) If the O has disposition D, then the O would manifest-D-ly were C to occur.

It should be relatively uncontroversial to note the connection between the having of a certain disposition and the truth (or likelihood of truth) of the sorts of conditional statements listed above. However, this connection has led many philosophers to propose a reductive analysis of dispositions in terms of conditional statements that courts far more controversy. The Simple Conditional Analysis states that:

⁸ Molnar, for instance, prefers the term 'powers' but sees all these terms as broadly co-referring, or at least referring to a class of entity that have something broadly in common (2003, p.57).

(1.iv) Something x is disposed at time t to give response r to stimulus s iff, if x were to undergo stimulus s at time t, x would give response r. (See, for instance, Lewis, 1997, p.143)

Whereas (1.i), (1.ii) and (1.iii) simply state that *if* something does have the relevant disposition, certain conditionals are true of it, the Simple Conditional Analysis analyses the having of a disposition in terms of the truth of the relevant conditional statement. For instance, according to the Simple Conditional Analysis, a glass 'being fragile' is reductively analysed to truth or falsity of the following sort of conditional:

(1.v) A glass is disposed to break at time t when knocked (i.e. is fragile) iff if the glass were to be knocked at time t, the glass would break.

If the Simple Conditional Analysis is correct, then if the above conditional can be shown to be true, then we ascribe the disposition 'fragility' to the glass in question. If it can be shown to be false, we are compelled to conclude that the glass is not fragile. Accepting the Simple Conditional Analysis seems to rob dispositions of any full blown status as constituents of reality; rather, they are considered as existing (or not) just in case of the truth (or falsity) of some counterfactual statement or other.

The Simple Conditional Analysis was once widely accepted, being endorsed by influential figures such as Gilbert Ryle (1949), Nelson Goodman (1954) and W. V. O. Quine (1960). However, powerful objections have been levelled against such an analysis of dispositions. Martin raises the possibility of 'finkish' cases; situations where the occurrence of the stimulus guarantees that the relevant disposition is removed and so the consequent of any (1.iv)-type statement about the disposition in question will always be false, and so we (ex hypothesi) mistakenly fail to ascribe the disposition to the object in question.⁹ Other counterexamples to the Simple Conditional Analysis have come from antidote cases. For example, consider a case where a man has already taken an antidote to a poison he ingests. Whilst it seems right to say that the poison *does* have the disposition to harm, and the stimulus 'ingesting' is present, the antidote guarantees the falsity of the relevant (1.iv)-type conditional, and so the Simple Conditional Analysis leads us to mistakenly fail to ascribe the disposition to the poison.¹⁰ Further counterexamples are presented by cases of masking. For example, consider the case of a fragile glass packed in plenty of bubble wrap packaging, whilst it seems correct to continue to consider the glass fragile, (1.v) would be

⁹ See Martin (1994) for a full account of finkish-ness and detailed examples.

¹⁰ See Bird (1998) for a full account of antidotes and detailed examples.

false of it, and so the Simple Conditional Analysis leads us to mistakenly fail to ascribe fragility to the glass.¹¹ These counterexamples show that, at the very least, the Simple Conditional Analysis is highly problematic, if not outright false. Attempts to defend the Simple Conditional Analysis by appeal to *ceteris paribus* clauses seem to be of little help as they tend towards vacuity:

(1.iv.2) Something x is disposed at time t to give response r to stimulus s iff, if x were to undergo stimulus s at time t, x would give response r, *ceteris paribus*, that is, unless conditions are such that x does not give response r to stimulus s at time t.

(1.iv.2) tends towards vacuity because of the generality of the 'unless' clause. This renders the analysis broadly equivalent to the claim that something has a disposition just in case it will manifest in a certain way so long as the situation it is in set up such that this is the manifestation it will produce, which is true of anything whatsoever. Furthermore, it is not clear to me that a sensible division can be maintained between dispositions, stimuli and so-called 'conditions' (see sections 2.1 and 2.2 for further discussion of this point). It also cannot be claimed, in defence of the Simple Conditional Analysis, that the sort of counterexamples raised above (as is sometimes the case with counterexamples and thought experiments) are abnormal fanciful philosophical inventions divorced from real situations: electrical fuses are real-life examples of finks (Molnar (1999)); antidotes to poison are a real phenomena; and as anyone who has ever moved house knows, there is little as mundane as a fragile object swathed in bubble-wrap (see Fara (2005)).

Such counterexamples have led David Lewis to announce that whilst "[A]ll of us used to think, and many of us still think, that statements about how a thing is disposed to respond to stimuli can be analysed straightforwardly in terms of counterfactual conditionals [...] The simple conditional analysis has been decisively refuted by C.B. Martin" (1997, p.143). Lewis went on to propose a more complex conditional analysis, the Reformed Conditional Analysis:

(1.iv.3) Something x is disposed at time t to give response r to stimulus s iff, for some intrinsic property B that x has at t, for some time t' after t, if x were to undergo stimulus s at time t and retain property B until t', s and x's having of B would jointly be an x-complete cause of x's giving response r. (1997, p.157)

¹¹ See Johnson (1992) for a full account of masking and detailed examples.

Whilst Lewis' Reformed Conditional Analysis seems to deal with the problem raised by finks, it is less clear it deals with masking and antidotes; in these cases there is no loss of the relevant property B, and yet the required manifestation *still does not* occur. Perhaps the Conditional Analysis could be further modified to accommodate cases of masking and antidotes, but what really seems to be the problem with the attempt to reductively analyse dispositions in terms of the truth of conditional statements is that the project of reducing what seem to be genuine features of the world (dispositions) to sets of statements is simply wrongheaded. However, there are other reductive analyses of dispositions which do not involve conditionals.

Categoricalism holds that at the fundamental level, all properties are categorical or qualitative (and so non-dispositional). Dispositional properties, if they exist at all, are amenable to reduction to some categorical or qualitative base. Different accounts are given as to exactly how this reduction is to be cashed out. David Armstrong objects to what he sees as the ontologically obscure positing of properties in nature which somehow 'point' to that which does not exist. (For example, consider a disposition that never manifests, say the disposition 'fragile', which is instantiated by a vase which never receives any shocks or blows whatsoever, and so never breaks.) The alleged ontological obscurity of never-manifested dispositions motivates Armstrong to attempt to reduce dispositional properties. He does so by arguing that statements ascribing dispositions to objects are true in virtue of certain laws of nature (in Crane, ed. 1996, p.17). Laws of nature, for Armstrong, are relations between properties, which are universals and categorical in nature. The sort of relation Armstrong envisages a law as being constituted by is a complex higher-order property that issues in a certain regularity (or probabilifies a certain regularity) of the relevant entity instantiating a further property (*ibid.*, pp. 41-44). Thus, the vase's being fragile is not as a result of it having some irreducible dispositional property. Rather, ascribing fragility to the vase is made true in virtue of the vase having a certain categorical property (Armstrong suggests this might be the microstructure of the glass—*ibid.*, p.38) and this property standing in certain (also categorical) relations. In virtue of standing in these relations, the vase is subject to certain laws. These laws ensure or probabilify the breaking of the vase if it is struck with a suitable force.¹² Ascribing a disposition, fragility, to the vase *just is* to say that it has a certain microstructural property and exists in a world where certain laws of nature hold; dispositions need not be posited as irreducible or full

¹² Depending on whether one wishes to propose a deterministic or probabilistic account of laws. It should be noted that nothing in the current discussion turns on this point.

blooded entities themselves, or if they are posited they are to be reductively identified with the relevant categorical property. (Crane attributes this claim to Armstrong, *ibid.*, p.4.) On such a view, the only genuine properties are categorical.

Prior, Pargetter and Jackson (1982) advance an account of properties that, unlike Armstrong's account, does not identify dispositions with their 'bases' (in Armstrong's account this base would be the microstructure). Their account centres around three specific theses, namely that:

(PPJ1) All dispositions have a causal basis. This basis is some property or property-complex that is, alongside some triggering condition, a "causally operative sufficient condition for the manifestation" towards which the disposition is directed (*ibid.*, p.251);¹³

(PPJ2) That dispositions are not identical to these bases;¹⁴

(PPJ3) That dispositions are causally impotent. This thesis is drawn from a combination of (PPJ1) and (PPJ2) alongside a denial of systematic causal overdetermination (*ibid.*, p.255).

The occurrence of the relevant triggering conditions and the having of a particular (taken to be non-dispositional) causal base is all that there is to explaining the truth of conditional statements about objects sometimes taken to imply the presence of a disposition (such as 'if the glass is knocked it will break' or 'if the tablet is put in water it will dissolve'). Dispositions, then, are not fundamental properties of objects. Rather, in putative cases of dispositionality, the relevant fundamental property or property-complex is that which comprises the causal base. Dispositions seem to be functionally determined and are, if they exist at all, second-order properties of these causal bases. Prior, Pargetter and Jackson hold that their claims are consistent with a species of 'weak realism' that would hold that there are no properties that could properly be called dispositions (*ibid.*, p.256).¹⁵

¹³ Prior, Pargetter and Jackson give the examples of "knocking" as the trigger for the disposition 'fragility' and "putting in water" as the trigger for solubility (1982, p.251).

¹⁴ Prior, Pargetter and Jackson give three arguments for why this is the case (two broadly empirical, one based on taking property names to be rigid designators—1982, pp. 253-254).

¹⁵ For more on the relationship between dispositions and their purported categorical bases (both in support of and against such an analysis of dispositionality), see Armstrong (1968); Mellor (1974); Mackie (1997); Johnston (1992); McKittrick (2003b), and Molnar (2003).

1.3 Realism about Dispositions

In opposition to these various reductive analyses of dispositionalism are a number of varieties of Dispositionalism; the view that dispositions are an irreducible and fundamental feature of reality. Dispositionalism can be broadly divided into two camps, 'strong' and 'weak'. Strong dispositionalism holds that an object's real properties are exhausted by its dispositions. Sydney Shoemaker puts forward a strong dispositionalist account which holds that a property's causal role is primary and that all properties of concrete objects are individuated by their 'causal profile' (2007, pp. 5-6).¹⁶ These causal profiles are had essentially by the property concerned (1980 and 1998). In response to objections (see 1998 for details) raised to his Causal Theory of Properties, Shoemaker introduces a distinction between 'forward-looking' and 'backward-looking' causal features of properties; the former being a property's "being such as to contribute in certain ways to what their possessors cause, or what powers their possessors have" and the latter a property's "being such that their instantiation can be caused in such and such ways" (1998, p.64). Thus it is not only the causal role the property plays in contributing to effects, but also the causal role it plays in being contributed to as effect that determines its identity. In later work, he holds that only the forward looking features of the property constitute its causal profile (2007, p.5). Shoemaker also distinguishes between the (first order) powers an object has and the properties on which these powers depend, which he describes as "second-order powers[...] powers to produce first-order powers" (1980, p.112). For Shoemaker "what makes a property the property it is, what determines its identity, is its potential for contributing to the causal powers of the things that have it" (*ibid.*). For Shoemaker properties just are:

[...]clusters of conditional powers[...] the identity of property is determined by its causal potentialities, the contributions it is capable of making to the causal powers of things that have it. And the causal potentialities that are essential to a property correspond to the conditional powers that make up the cluster with which the property can be identified; for a property to have a causal potentiality is for it to be such that whatever has it has a certain conditional power.

This account is intended to capture what is correct in the view that properties are just powers[...] whilst acknowledging the truth[...] that a thing's powers or dispositions are distinct from, because 'grounded in', its intrinsic properties. (*ibid.*, p.115)

¹⁶ Shoemaker would not call his account 'dispositionalist' as he holds that 'dispositional' is a predicate which picks out not a type of property, but a type of predicate (1980, p.113). I have no desire to split hairs over terminology. What is important is that, as should be clear, Shoemaker's account of property stands in contrast to the reductive analyses of dispositions discussed above.

Shoemaker identifies his position as primarily epistemologically driven. It cannot be explained how properties "engage our knowledge" unless some version of a causal theory of properties is accepted (*ibid.*, p.116).¹⁷

Hugh Mellor has also argued in favour of strong dispositionalism. He argues against reducing dispositions to any sort of microstructural property (contra Armstrong) on the basis that to explain such structures we need dispositions, and so such properties cannot be a reduction base for dispositions (1974, pp. 171-172). Even traditionally paradigm examples of non-dispositional properties, such as triangularity, seem to bestow conditional features to their bearers; for example, being "such that if the corners were to be (correctly) counted the result would be three" (*ibid.*). Mellor takes the sign of dispositionality to be supporting subjunctive conditionals (1982). All real properties, he holds, support such conditionals, and so to consider that there are *any* non-dispositional properties is simply "myth" (1982, p.96). Mellor has since modified his viewpoint and has argued that whilst *predicates* might be properly described as dispositional or non-dispositional, *properties* "can just be" (without being either of these!), that to "call a property F 'dispositional' is just to transfer that epithet from the predicate 'F', [and] this is a false dichotomy" (2000, p.768). This is not to suggest that Mellor now sees properties as non-dispositional, but rather that he takes the distinction between categoricity and dispositionality to be a mistaken one (or mistaken if it applies to properties as opposed to predicates).

Stephen Mumford favours a strong dispositionalism in which all real properties are just clusters of powers (see for instance 2004, section 10.6). More recently, he has expressed support for a one-category trope ontology, in which objects and substances are accounted for by bundles of tropes, and tropes themselves are clusters of powers (2013, pp. 14-15). This position perhaps represents the most thoroughgoing dispositionalism one might endorse: the view that at the fundamental level, *everything* is a disposition. Alexander Bird argues in favour of the claim that all fundamental properties have dispositional essences (see for instance 2005 or 2007). However, he does consider the possibility that there might be non-fundamental properties that are categorical, and even that there might be non-fundamental properties which are *neither* essentially disposition *nor* categorical (one example he gives of such properties are those whose essence involves having a certain composition, such as 'being a methane molecule'—see 2013, p.28).

¹⁷ Shoemaker has since abandoned the view that properties are constituted by clusters of powers (see, for instance, 1998).

Weak dispositionalism, in contrast, holds that at least some properties are dispositions, and that such properties are irreducible to non-dispositional properties. These claims are sometimes coupled with the claim that *almost* all real properties are real dispositions. Ullin T. Place argues for a weak dispositionalism, holding that dispositions cannot be reduced to categorical properties, although having certain categorical properties standing in certain relations to one another by the object in question will usually (if not always) figure in the *explanation* of said objects having certain dispositions (in Crane, ed. 1996, p.26). Molnar argues that almost all real properties are what he calls 'powers'. The hallmarks of being a power are: directedness, independence, actuality, objectivity and intrinsicity. (See Molnar, 2003, chapters 3-7 for detailed arguments for each of these criteria.) Molnar goes on to argue that all scientifically discovered properties meet these requirements. Claims that if such properties are dispositional they must have some categorical base (such as those made by Armstrong and Prior, Pargetter and Jackson) are dismissed based on the grounds of the 'missing base argument': Molnar argues that experimental data from the physical sciences supports the claim that the fundamental properties are powers, and fails to support the claim that such powers have some non-powerful basis (pp. 131-136). On these grounds, reductive accounts of dispositionality are to be rejected. However, Molnar does accept that there may be (and almost certainly are) some non-powerful properties, although these may well be restricted to the spatio-temporal properties pertaining to an object's location (see 2003, chapter 10).

Ellis and Lierse also present a weak dispositionalist account, which does:

[...]not seek to restore their [dispositions'] reputation by attacking the status of categorical properties, or by arguing that all properties are basically dispositional, as some philosophers have done[...] what[...] we seek to provide, is a more adequate semantics, and an ontologically more satisfactory theory of dispositions—one which allows at least some dispositions to be counted as genuine properties existing in their own right. (1994, p.27)

They tie the notion of a disposition to that of a natural kind. Within a metaphysical framework of natural kinds of objects it is argued we should also accept natural kinds of *processes*. Where a natural kind of object is given or designated by the instantiation by the object of the relevant real properties, so too is a natural kind of process given or designated by the instantiation by the objects involved in the process of relevant real dispositions (*ibid.*, p.28). Thus dispositions are to be taken alongside categorical properties as equally real and genuine features of the way the world is. There is to be no prospect for

reducing dispositions to categorical properties: the latter are not the sort of entity suited to providing the grounds for a process' belonging to one natural kind rather than another.

In this section I have briefly glossed several of the major positions in the debate over the ontological status of dispositions. In the section that follows I present an introduction to Martin's Limit View of properties, and locate this position within his general metaphysical system.

1.4 Martin and the Limit View

It is in the context of the debate over the fundamentality of dispositional/categorical properties that Martin presents the Limit View; an account of the ontology of properties that recognises some truth in the positions outlined above, whilst also arguing that none are satisfactory. I shall not offer an in-depth account of the Limit View here, as Chapter Three of this thesis is dedicated to a detailed and extensive analysis of the development of the position.¹⁸ Rather I shall be concerned to present a brief introduction to the position, to locate it within the debate discussed above and also to provide a summary of pertinent aspects of Martin's general metaphysical outlook. It is not my intention, however, nor a concern of this thesis, to defend these other aspects of Martin's metaphysics, I discuss them here simply in order to give context to the position with which this thesis is concerned.

Martin first introduced the Limit View (although it had not yet been given this moniker) in an endnote to his (1984), stating that "[a]ny real, empirical property has its categorical and dispositional aspects" (p.20). The motivation for this claim comes from arguments (to be discussed in the Chapter Three of this thesis) that it cannot be maintained either that properties are purely categorical or that they are purely dispositional. Thus he agrees with the categoriclist in that pure dispositionality is a fiction and that categoricity is a real part of the way the world is. He also agrees with the dispositionalist that pure categoricity is a fiction and that dispositionality is a real part of the way the world is. Yet he disagrees with both camps in holding that neither categoricity nor dispositionality is fundamental or basic with regards to the other. Martin goes on, in two different papers, to state:

¹⁸ It has been argued that over the course of his career Martin actually presented more than one discrete position under the moniker Limit View. See Chapter Three of this thesis and, for example, Molnar 2003 pp. 149-157).

Pure categoricity[/categoricity] of a property or state is as much of a myth and philosophical artifice as is pure dispositionality. (1993a, p.519 and 1993b, p.184)

This claim, combined with the claim that:

[...]properties are indissolubly categorical-*cum*-dispositional or dispositional-*cum*-categorical. The dispositionality is as basic and irreducible as is the categoricity, and there is no direction from one as basic in a property to the other as 'supervenient'. (1993b, p.184)

captures the core commitments of the Limit View. All properties, for Martin, are equally categorical and dispositional, and the hope of reducing either dispositionality or categoricity to the other, or of eliminating one of these notions from our ontology is:

[...]philosophical artifice and error (*ibid.*)

[...]conceptual artifice and unrealisable abstraction suggested, perhaps, by some of the surfaces of grammar. (in Crane, ed. 1996, p.74)

Properties, at the fundamental ontological level, then, are neither purely dispositional nor purely categorical, rather, *both* categoricity and dispositionality inhere in *all* properties. Exactly how this claim might be cashed out is the concern of the next five chapters of this thesis. Having introduced the position, and its unique place in the categorical/dispositional debate in property ontology, I shall go on to discuss a number of aspects of Martin's general metaphysics.¹⁹

Martin pursues a realist metaphysic in which he is committed to a two-category ontology. The fundamental ontological categories he compasses are 'substance' and 'property'. His realism is best expressed in his commitment to the truthmaker principle; that any truth about the world is true in virtue of there being some truthmaker, some way the world is, that makes it true.²⁰

Not all the ways the world can be represented are ways the world is, so a particular creature found it necessary to employ the following convention to distinguish representation from misrepresentation. Representations that indicate the way the world actually is they called 'true', and representations that failed to do so they called 'false'.

¹⁹ This account I shall draw from *The Mind in Nature* (2008), Martin's final publication and work that comes closest to a sustained account of his overall philosophical standpoint. The only other book he published was a monograph, *Religious Belief* (1959).

²⁰ Martin is often credited with originating truthmaker theory, although, as with many of his philosophical innovations, he certainly was not the first to publish on the topic. See for instance Snowdon (2008) or Crane (in Crane, ed., 1996 p.15).

Truth is a relation between two things—a representation (the truth *bearer*) and the world or some part of it (the *truthmaker*). (2008, p.24)

Alongside this Martin urges against any linguistically driven account of metaphysics, claiming the Quinean motto 'To be is to be the value of a variable' (for instance, 1948) ought to be met with "laughter" (2008, p.93). Both life and the world, Martin argues, were there before there was language, before there were any variables to be the value of!²¹ Without truthbearers, there would indeed be no truth: such a world would be devoid of truths *about* the world, but there would be *world* aplenty to sustain potential truths *if* there were any truthbearers.

Martin's realism and anti-linguisticism is complemented by a commitment to atomism and holism. His atomism manifests as the claim that ontology will bottom out in what Locke referred to as 'the finer insterstices of nature'. These 'insensible corpuscles' may turn out to be epistemologically inaccessible to us, but Martin holds we can at least, without knowing of their nature, infer their existence (see for instance 2008 p.40). Manifest, macro-level objects are composed of these fundamental ontological atoms in various relations. Martin calls this position "the compositional model" (*ibid.*, p.39). Genuinely emergent phenomena are taken to stem from the complexity of the compositional model. (See Martin, 2008 Chapter 10 for details.) Thus Martin's system compasses an ontologically fundamental level of atomistic entities which, variously composed and related, give rise to a whole host of dependent but genuinely emergent entities and phenomena—this is Martin's holism. Martin does not offer an account of exactly what entities the fundamentals of his system are, but indicates a faith in physics to answer the question:

My account[...] is intended to apply even to unstructured elementary particles, or superstrings[...] or whatever turns out to be the ultimate basis for the world around us. (*ibid.*, preface, p.xv)

His seeming lack of concern with the answer to this question may stem from what he sees as a Lockean standpoint that hoping to supply "specific and full" identity conditions for anything other than abstract entities (so for any physical object or fundamental) is a task

²¹ This point is well illustrated (literally) in the final cartoon of Martin's book of humorous philosophical drawings *Philosophical Pictures* (1990).

that would be "endless" and so "[t]he demand for them is the ploy of the mad logician" (*ibid.*, fn.1, p.47).²²

Against this background Martin develops his account of properties. Anti-linguisticist sentiments lead Martin to develop a sparse theory of properties. Minimally speaking, a sparse theory holds that not every meaningful predicate denotes a property. Properties and meaningful predicates are not isomorphic, and thus sparse theory stands in opposition to semantic or linguistic views of property under which for every predicate true of some object, that object has some property that matches up one-to-one with the predicate. The claim of the sparse view is simply that this is not the case, there is not one property for every meaningful predicate that can be applied to an object (and vice versa):

Predicates are linguistic, mind-dependent entities; many properties of objects are neither. Linguisticism is silly, but it is also endemic and largely unnoticed by many practising ontologists. (*ibid.*, p.80)

That meaningful predicates and real properties do not match up one-to-one should be evident from the considerations of such predicates as:

(1.vi) 'is such that it is not the case that p and also not p'

(1.vii) 'is non-self-identical'

(1.viii) 'is north of London'

Every entity whatsoever satisfies (1.vi); everything is such that contradictions are false.²³ We could replace the two instance of 'p' in (1.vi) to generate another predicate, say with 'q' in the place of 'p'. Every entity whatsoever would satisfy this new predicate, also. We could follow this procedure an infinite number of times, generating an infinite number of (1.vi)-like predicate which are satisfied by every entity whatsoever. If linguisticism is correct, then these predicates pick out properties; and therefore, every entity whatsoever instantiates an infinity of identical (1.vi)-like properties. This should strike those of an ontologically serious mindset as inflationary, implausible and unattractive. (1.vii) seems meaningful and so under a linguistic account of property would denote a property. However, nothing could be such that it had the property of non-self-identity. The worry with (1.vii) is not merely the (already somewhat queer and ontologically suspicious) issue of proposing that there exists

²² Martin writes "Of course, all of God's children have identity conditions. I have not seen a detailed and full set of identity conditions for any spatiotemporal entity (chair, rock, suit jacket, cricket ball, etc.)" (2008, fn.1, p.47)

²³ Considerations from para-consistent logic aside.

a property that has no instances, but the even queerer and more suspicious suggestion that there is some property that *cannot in principle* have any instances. Finally, whilst (1.viii) is clearly meaningful and true of many entities (me as I sit in Durham writing this chapter, for instance), changing this would not require any change in the way I, intrinsically, am. Properties supposedly denoted by (1.viii) and similar predicates have in the debate been referred to as 'mere Cambridge' properties, and are to be contrasted with 'real' properties. Martin would, and I with him, refrain from calling these properties at all. The sparseness of Martin's view of properties extends past the minimal requirement of denying predicate to property isomorphism (which would be consistent, for example, with holding that all but one meaningful predicate denotes a real property) to the claim that the fundamental properties, ontologically speaking, will be the properties of the fundamental atoms (*ibid.*, p.39), allowing for "a realist compositional model for the relationship between the macroscopic and the submicroscopic" (*ibid.*, p.42). Thus for Martin, most predicates will not denote genuine fundamental properties; macro-level predicates, if they pick out a property at all, will pick out a complex, structured property composed of more basic properties standing in various relations and configurations.

Martin's properties are tropes, particulars grouped by exact or inexact similarity. There are no abstract universals and nothing to a particular property over and above its particular instantiations. The similarity relation which replaces the need for positing abstract universals is for Martin "a similarity *simpliciter* between one, unique, individual specific property instance and some other property instance" (*ibid.*, p.81). As properties are the respects in which *objects* are more or less similar to one another, a property instance "needs no *further* respect in which to be similar or dissimilar [to other property instances in its exact similarity class]" (*ibid.*). Many metaphysicians who offer a trope theory of properties wed this to a bundle theory of objects. This consists in the claim that an object is nothing over and above a collection of co-present tropes (property instances), leading to a single category ontology. Martin, as mentioned above, holds a two-category ontology, and so rejects the bundle theory. He claims:

Space-time is a bearer of properties; it is not itself borne as a property. Thus it makes no sense in ontology or modern physics to think of space-time as empty and propertyless. Obviously, space-time fulfills the conditions of a substratum. (*ibid.*, p.1)

And:

I have insisted that space-time *has* properties, yet it is not itself had as a property of even set of properties, and it could not exist without properties. A propertied space-time is a one-object universe and space-time satisfies the correct definitions of 'substratum.' (*ibid.*, p.195)

Properties, then, are borne by regions of space-time, and macro-objects as we discriminate them are regions or segments of space-time propertied such that they exhibit relevant similarities and dissimilarities to each other.

Turning to Martin's account of the nature of properties, he holds that all properties are dispositional as well as qualitative. Martin rejects any conception of dispositionality which sees a disposition as a relation between a property and some potential or actual manifestation:

Dispositions are actual, although their manifestations can fail to be. It is an elementary confusion to think of unmanifesting dispositions as unactualized *possibilia*, although that might serve to characterize unmanifested manifestations. As such, a disposition cannot be a relation to a manifestation. (*ibid.*, p.12)

If we were to take a disposition as a relation to a manifestation, then we have two options: to see this as a relation to some abstract possible entity or to consider the disposition as extant only in virtue of some actual manifestation. The former option commits one to permitting abstract entities as relata in real relations, something that would not sit well with Martin's realist commitments. The latter option has the unfortunate consequence that if a disposition only exists in virtue of being a term in a relation to an *actual* manifestation, then dispositions that never manifest (for instance, in the case of a fragile glass which never gets struck and so never breaks) cannot be said to exist or be had by the relevant object. Any ontologist who takes dispositionality seriously will find this consequence absurd (even one who wishes to offer a reductive or deflationary account of dispositionality). As Martin puts it:

A thing's dispositions can change[...] A piece of glass can be fragile for an hour and cease to be fragile for an hour, the result of a change in temperature. Neither a disposition nor a change of disposition need manifest itself. The glass need not actually break during the hour that it is fragile[...] If a piece of glass breaks, something has happened to it. If a piece of glass ceases to be fragile, something has happened to it. (*ibid.*)

Change in dispositionality is an actual change, a change in the real properties of an object, whether or not this change is apparent or even in principle detectable by us (Martin gives the example of a deity who causes a glass to become fragile when and only when it is struck. In such a case we might never be able to detect that the glass is not fragile the rest

of the time. (*ibid.*, p.13)). Similar considerations lie behind Martin's objections to reductive conditional analyses of dispositionality discussed in the previous section of this paper.

Martin rejects accounts which view the correct model for understanding dispositionality as a disposition being 'set off' by some triggering event so long as there are appropriate background conditions. In place of this, Martin suggests the notion of reciprocal disposition partners for mutual manifestations:

The two-event-cause-and-effect view is easily avoided and replaced by the view of mutual manifestation of reciprocal disposition partners, suggesting a natural contemporaneity. (*ibid.*, p.46)

...*whatever* is causally operative should have its full status as reciprocal or collaborative disposition partner for a mutual manifestation. (*ibid.*, p.87)

With reciprocal disposition partners *each* being for the *mutual* manifestation, *each* must have the directedness and selectivity for such a manifestation. (*ibid.*, p.88)

Consider again our fragile glass. Under the model suggested by Martin, that which disposes the glass to break, its fragility, is not a lone entity 'waiting' for the right opportunity to fly into action (say, the striking). Rather, the fragility, the striking, the solidity of the entity which strikes, the gravitational field, the presence of a relatively thin atmosphere and so on all act *in concert* to bring about a mutual manifestation: the breaking of the glass. There is no hierarchy here. The fragility of the glass should be given no metaphysical priority in our model (*ibid.*, p.144). A single disposition is directed towards an "infinity of reciprocal disposition partners for, against or neutral with regard to an infinity of manifestations" (*ibid.*, p.30). Thus, the very same fragility of the vase could partner to produce very different and novel results with a different set of reciprocal disposition partners.

Dispositions should not be thought of as isolated, but rather as participating in a network or web of potency/dispositionality:

Start with any disposition partner and you find a network—a Power Net. (*ibid.*, p.87)

Every disposition is, in this way, a holistic web, but not just an amorphous spread of potency. (*ibid.*, p.6)

In every genuine disposition ascription an ineliminable reference to the infinity of potential partners is inherent. The dispositions that an object instantiates locate it within the intricate structure of this network, they define its connections, its potentiality for interaction. But, as Martin insists, this potency is not shapeless, raw or blurred round the edges; on the contrary, it is brought into sharp definition by the reciprocal partnerings

which are possible for that object in virtue of the particular genuine dispositions (properties) it possesses. The network is infinitely intricate and complex, but equally it is perfectly defined and delineated. The network (and any particular disposition that participates in it) is disposed towards far more than it could ever manifest. Whilst the potentialities which this intricate filigree of reciprocal partnerings for mutual manifestation are directed towards run to infinity, the number of mutual manifestations which actualise will always be much lower. This plenitude of potentiality, Martin claims, is “carried” by the relatively limited number of actual dispositions, and it is “natural that so little can carry so much” (*ibid.*, p.60).

This conception of dispositionality informs Martin's account of causation, which holds the inter-relatings of reciprocal disposition partners for mutual manifestation to be prior notions to those of cause and effect:

[...]the view of mutual manifestation of reciprocal disposition partners [suggests] a natural contemporaneity[...] It [causation] is not a matter of two events [cause followed by effect], but of one and the same event—a reciprocal disposition partnering as a *mutual* manifestation. (*ibid.*, p.46)

And:

It becomes obvious that dispositionality is prior to and more basic and far more numerous than their mutual manifestations, which is cause and effect. Disposition and manifestation are the basic categories by means of which cause and effect are to be explained. (*ibid.*, p.55)

Causation is not a case of some lone cause occurring from which stems some isolated effect. Such a picture may be epistemically helpful, but, Martin holds, at the fundamental ontological level causation is underpinned by the intricate and complex coming together of a large number of dispositions which 'work together' to bring about the manifestation we might denote 'effect'. Ontologically speaking, there is little promise of identifying either some one amongst these, or some particular event, as 'cause' whilst neglecting all the others.

In this section I have outlined those features of Martin's general metaphysical account which are most salient for the matter at hand—an evaluation of his Limit View account of properties. In the next section of this chapter I shall outline the structure this thesis will follow in addressing this topic.

1.5 Summary of Chapters

Chapter Two presents a review of how the distinction has been drawn in the literature between powers or dispositions on the one hand, and categorical or qualitative properties on the other. I argue against characterising dispositions and qualities contra-distinctively and mutually exclusively. A way of drawing the distinction is outlined which does not render the Limit View's 'surprising identity thesis' a *prima facie* inconsistency.

In Chapter Three, I present an in depth, chronologically ordered exploration of how the Limit View is presented through the body of Martin's work. I argue that various distinct positions can be identified which have borne this name. Attending to the similarities and differences between the various versions of the Limit View provides a foundation for the defence of this view against criticisms examined in Chapter Four, and the critical interpretation of that view which I argue in favour of in Chapters Five and Six.

Chapter Four examines various criticisms which have been levelled at the Limit View. Drawing on the work of the second chapter, I argue that the majority of these criticisms arise due to misinterpretations of Martin's position. However, Lowe's charge that the surprising identity thesis is metaphysically obscure cannot be met in this fashion.

In Chapters Five and Six I aim to meet this challenge, by providing a critical interpretation of the Limit View which pays particular attention to attempting to clarify the surprising identity thesis. In doing so, I draw on a combination of resources from multi-categorical ontology and from Francisco Suárez's work on the metaphysics of distinctness, which both clarifies the surprising identity thesis and resolves the *prima facie* contradiction between the holding of this thesis and Martin's insistence that, notwithstanding their identity, a distinction which is "more than in the eye of the beholder" (Martin (1996, p.174) and (1997, p.202)) obtains between the dispositional and the qualitative.

In the second half of the thesis, I explore how the version of the Limit View which I defend in the first half can be put to work in the debate surrounding the ontology of mind and body. Chapter Seven introduces the material and briefly outlines Martin's own account of the mind. New responses to the Zombie Argument and the Knowledge Argument which are available to those who adopt the version of the 'Limit View' outlined earlier in the thesis are developed in Chapters Eight and Nine respectively. Thus, it is argued, that this position ought to be seen as attractive by anyone wishing to avoid the property-dualist conclusions of those arguments.

In Chapters Ten and Eleven I explore how ‘the physical’ and ‘the mental’ ought to be characterised. I argue in favour of a science-based conception of the physical in which dispositionalism is a central concept, and, drawing on work by David Chalmers and Galen Strawson, a conception of mentality in which qualitativeness is key.

On the basis of these characterisations, it is argued in Chapter Twelve that the adoption of the Limit View should lead one to accept a monistic ontology of mind and body. I argue that this position is best conceived of not as a physicalist or idealist/phenomenalist position, but rather as a variant of neutral monism. The details of this position are explored, with focus on what distinguishes it from both traditional forms of neutral monism, and from a variety of other approaches to the debate concerning the ontology of mind and body.

I conclude that, despite facing a serious challenge in the form of Lowe’s charge of obscurity, Martin’s Limit View account of properties can be made clear. Furthermore, its adoption opens up powerful new lines of response to arguments in favour of property dualism. However, the adoption of the Limit View does not commit one to a traditional physicalist position (either reductive or non-reductive); rather, it leads to a neutral monism which maintains the monistic approach often associated with physicalism, whilst respecting dualist intuitions that there is some significant difference between the physical and the mental (although, on this account, that distinction is not a fundamental, ontological one). It is indicated that with more work we might uncover potential advantages of this neutrally monist account of the nature of mind and body, in areas such as the mental causation debate and the philosophy of perception.

Chapter Two: Dispositional and Qualitativity

"In this matter, nothing is pure." (Martin (2007, p.68))

This thesis is centred around a long running debate in the metaphysics of properties: that which concerns whether there are two fundamentally different kinds of properties, on the one hand, dispositions or powers or tendencies (I take these terms to be broadly equivalent) and on the other, categorical properties or qualities or occurents. Paradigmatic examples of dispositional properties include fragility, solubility, elasticity; paradigmatic examples of categorical properties include shape and mass. As seen in the introduction, there are various possible positions which can be taken on this issue. First, one might assert that there are two fundamental kinds of property, each of equal ontological standing. Secondly, one might assert that whilst both kinds of property exist, dispositions are dependent on categorical properties. Thirdly, one might hold that only one kind of property exists; either dispositions or categorical properties. (See sections 1.2 and 1.3 for examples of all these positions). Alternatively, one might question whether this distinction can be drawn at the fundamental, ontological level, and hold that whilst there is just one kind of property, they are neither best characterised as dispositional nor as categorical (for instance, Martin (in Crane, ed. (1996)), Heil (2003), and more recently Strawson (2008b), Engelhard (2010) and Jacobs (2011). This final view, which itself may take a number of forms, is the focus of this thesis.

In this chapter I shall be examining various attempts to characterise the distinction between the dispositional and what is most traditionally called the categorical (although I follow Martin in taking 'categorical' to be a misleading name for the contrast class to 'dispositional', and prefer the term 'quality', in this chapter I shall use both terms interchangeably).²⁴ I am not, in this chapter, concerned so much with the nature of the distinction itself (whether it is a conceptual or ontological one), but rather with the various

²⁴ It could be argued that 'categorical' ought to be contrasted to 'hypothetical'. If one believed dispositions were not full blooded properties, that they were merely possibilities or the like, then perhaps they should be contrasted to categorical properties (one might think this is one made the common mistake of conflating dispositions and their manifestations: a fragile vase that has not been struck is, in virtue of being fragile, only possibly or hypothetically shattered; but it is quite straightforwardly—that is, categorically—fragile). However, if one is realist about dispositions, then this terminology is at the very least misleading. (See for instance Martin (2007, p.86).)

principles along which the distinction has been drawn. As shall be seen, it is common to characterise the difference between the two contra-distinctively, most usually by offering some criteria C for dispositionality and then defining the categorical as properties-which-are-not-C. This broad approach makes the classes of disposition and categorical property mutually exclusive, forcing the final account outlined above into the unstable position of claiming that properties are either both C and not-C or neither C nor not-C. Following the examination of the various attempts to characterise both the dispositional and the categorical which have been popular in the literature, I shall attempt to offer a characterisation which does not render the dispositional and the qualitative mutually exclusive, thus laying the groundwork for a credible interpretation of the view that the dispositional/categorical distinction is not one which can be drawn at the level of fundamental ontology.

2.1 Dispositions, Categorical Properties and Conditionals

As discussed in section 1.2, many have been so taken by the apparent relationship between dispositionality and conditionals that they hoped to provide a reductive analysis of dispositional properties in favour of the truth of certain conditionals. In that section, however, we saw how powerful counter-examples have been raised against this analysis. In this section, we will examine whether an approach to characterising what distinguishes dispositions from categorical properties that makes appeal to conditionals can be maintained. Consider a paradigm example of a dispositional property, say, fragility, and consider a particular instance of this property, say, as it is instantiated in a particular vase. There seem to be a variety of subjunctive conditionals which are true of the vase in virtue of its instantiation of fragility, such as:

(2.i) If the vase were struck with a hammer, then it would shatter.

Noting this relationship between paradigm cases of dispositionality and the truth of certain subjunctive conditionals has led many to suppose that entailing subjunctive conditionals is criterial for dispositionality, and thus that the distinction between dispositional and categorical properties can be drawn based on this criterion. If the instantiation of a property by a substance entails the truth of some subjunctive conditional, then that property is a disposition. If it does not, then the property is categorical.²⁵ On this approach,

²⁵ See for instance Goodman (1954), Prior (1985) or Place (in Crane, ed., (1996)).

'dispositional' and 'categorical' represent two mutually exclusive classes: no property could be such that it both entails and does-not-entail the truth of some subjunctive conditional.

In order to establish the adequacy of characterising the distinction between dispositional and categorical properties by appeal to the entailment of conditionals, two claims need to be substantiated. First, it needs to be shown that the instantiation of dispositional properties does indeed entail the truth of subjunctive conditionals. Secondly, it needs to be shown that the instantiation of categorical properties does not. Whilst drawing the distinction in these terms has some *prima facie* appeal, serious challenges have been raised to each of the claims outlined above.

Martin has suggested that rather than providing a criterion for dispositionality, conditionals are merely "[...]clumsy and inexact linguistic gestures[...]" towards them (1994, p.8). This view is motivated by consideration of what he calls 'finks'. A disposition is finked if the coming to pass of an event which would normally be expected to trigger the manifestation of the disposition causes the loss of the disposition itself, thus meaning that the manifestation never occurs. These triggers are specified in the antecedent of the associated subjunctive conditional, whilst the manifestation is specified in the consequent. Consider our fragile vase. Imagine it has been hooked up to some futuristic protection device, which operates such that if the vase ever receives a blow from a hammer, its physical structure is instantaneously changed such that it can absorb the blow without shattering. *Ex hypothesi*, the vase in the example is fragile, but the conditional:

(2.i) If the vase were struck with a hammer, then it would shatter.

is not true. Similar problems are raised by Bird who considers the case of 'antidotes'. In antidote cases, whilst the disposition is not removed, some further factor interferes with the process of manifestation with the result that despite the occurrence of the trigger, the manifestation does not come about:

The sorcerer [who wishes to protect the vase], being a brilliant physicist, may be able to administer shock waves to the struck [vase] which precisely cancel out the shock of the original striking, hence saving the [vase] from destruction. (1998, p.228)

Again, *ex hypothesi*, the vase is fragile, indeed, this is the very reason it makes sense that the sorcerer has to go to pains to protect it. But again, the conditional (2.i) is not true, for the antidote-effect of the counteracting forces the sorcerer would administer to his precious vase mean that no shattering will occur. The possibility of finks and antidotes suggests that there is no straightforward entailment from the instantiation of a disposition

such as fragility to the truth of a subjunctive conditional such as 'If the vase were struck with a hammer, then it would shatter.' If these points stand, then it is untenable to draw the distinction between dispositional and categorical properties along the lines of the entailment of subjunctive conditionals, for dispositions do not entail such conditionals.

Mellor has argued that in virtue of the instantiation of paradigm examples of categorical properties, such as shape, certain subjunctive conditionals follow:

Take the paradigm, molecular structure—a geometrical (for example, triangular) array of inertial masses. To be triangular is at least to be such that if the corners were (correctly) counted the result would be three. (1974, p.171)

Mellor's objection to distinguishing between dispositional and categorical properties by appeal to conditionals denies not that the instantiation of a disposition entails a conditional, but rather asserts that the instantiation of *any* real property will entail some subjunctive conditional. If this is the case, then the proposed characterisation of the distinction cannot be maintained. It should be noted that accepting Mellor's criticism does not commit one to any particular view on the ontology of properties. If one accepts the entailment of a subjunctive conditional as criterial for dispositionality, then one might draw from Mellor's argument the conclusion that all real properties are dispositions. However, one might take the objection simply to show that the entailment of a subjunctive conditional is not the line along which to distinguish dispositional from categorical properties, leaving open the possibility of holding any of the positions outlined in the first paragraph of this chapter.

Given the problems raised above, whilst there may well be *some* important relationship between dispositionality and conditionals, it does not seem that the distinction between dispositions and qualities/categorical properties can be straightforwardly drawn based on the former entailing subjunctive conditionals, and the latter failing to do so. Mumford (1998) has defended the view that the distinction between dispositional and categorical properties can be drawn along such lines. Briefly, he argues that through an appeal to ideal and background conditions, finked (and, I take it, this response could be extended to antidote cases also) cases can be successfully accommodated. He appeals to a notion of conditional conditionals (*ibid.*, p.88):

(2.ii) If conditions are ideal, then (If the vase were struck with a hammer, then it would shatter.)

As finked (and antidote) cases involve non-ideal conditions, the finked (or antidoted) vase, whilst it does not entail (2.i), still entails (2.ii). To Mellor's objection, he responds that whilst both dispositional and categorical properties may entail conditionals, they do so in different ways, and so a principled distinction can still be maintained based on the relationship between the ascription of the property and the entailment of conditional statements (*ibid.*, pp. 79-81).²⁶

If one understands the interaction of dispositions as mutual manifestation, as Martin does (see section 1.4 of this thesis), as I do, and as Mumford also now does (see, for instance, *ibid.*, p.16 or Mumford and Anjum, forthcoming), then I do not think the appeal to ideal and background conditions can be maintained, for all 'conditions' (that is, the arrangement of all the dispositions) are equally involved in the (mutual) manifestation. This renders conditionals such as (2.ii) trivial, as it comes down to something like:

(2.iii) If all the dispositions involved are directed such that if the vase were struck with a hammer, then their mutual manifestation would be the shattering of the vase, then (If the vase were struck with a hammer, then it would shatter.)

Given their triviality, the truth of conditionals such as (2.iii) fails to explain away cases such as finking and antidoting. Furthermore, their truth follows from anything whatsoever (and the scope of the anything here is not even limited to property ascriptions), and so they cannot provide a principled line along which to distinguish dispositionality from categoricity/qualitativity. Approaches to characterising the distinction between the dispositional and the categorical by appeal to the entailment of conditionals, in light of these objections, cannot be maintained.²⁷

2.2 Stimuli and Manifestations

Another approach to characterising what distinguishes dispositions and categorical properties makes appeal to the notions of stimulus and manifestation. Bird (2007, pp. 43-45) characterises dispositions as properties which, of necessity, relate some characteristic stimulus to some characteristic manifestation. Categorical properties, in contrast, if they relate stimuli and manifestations, do so only contingently. As with the approach discussed

²⁶ Mumford has since rejected the account put forward in (1998) on the basis that he now takes it to be insufficiently realist. (See, for instance, 2013, p.13.)

²⁷ See Lowe (2011) for an interesting historical analysis of what motivates the appeal to conditionals in the dispositions literature, and why this approach has been so popular.

in section 2.1 above, this makes the distinction between dispositional and categorical properties/qualities mutually exclusive; Bird makes this explicit, stating "[c]learly no property may be categorical and have a dispositional essence at the same time" (*ibid.*, p.44). Mumford's functionalist account of dispositions, advanced in Mumford (1998), also characterises dispositionality in terms of a property, as a matter of conceptual necessity, relating stimuli to manifestations in a certain manner (what he calls causal mediation, see, for instance, *ibid.*, pp. 197-198).²⁸ However, Mumford maintains that the distinction applies at the level of how properties are characterised or conceived (for instance, *ibid.*, p.215). According to the sort of conception of dispositionality suggested by Bird and Mumford, then the fragility of a vase should be conceived as:

(2.iv) The vase being fragile necessitates²⁹ R(striking-with-a-hammer, shattering)

Conceiving of dispositionality in terms of stimulus-manifestation pairs (or clusters of such pairs) bears some similarity to conceiving of dispositionality in terms of conditionals. Given this similarity, analogues of the problems mentioned above seem to apply to this account also. For instance, it seems that the vase in either the finked or antidote-d situations is still fragile, although its being so does not relate the occurrence of the stimulus (striking) to the occurrence of the manifestation (shattering). Bird has suggested, in response to the problems of finks, that finked cases cannot occur at the level of the fundamental, sparse properties (2007, section 3.3.2). Whilst he holds that antidoting might be possible at the fundamental level, he holds that progress in science suggests that it will be relatively constrained. This should allow for the possibility of accommodating antidotes into the characterisation of a disposition:

If A is an antidote to the disposition D to yield M in response to S, then we could replace D by the disposition D* to yield M in response to (S in the absence of A₁, A₂, A₃, ...), where {A₁, A₂, A₃, ...} is the set that includes every possible antidote to the original D. (*ibid.*, p.62)

If this move is acceptable, then the possibility of antidotes does not threaten to undermine the characterisation of a disposition in terms of relating a stimulus-manifestation pair, for all cases in which an antidote is present are specifically excluded by the nature of the disposition itself. That there might appear to be something gerrymandered about such a move, Bird recognises, although he suggests that in the case of fundamental properties this

²⁸ Mumford no longer favours this characterisation of dispositionality, see (2013).

²⁹ Either conceptually, for Mumford, or metaphysically, for Bird.

should not be so problematic, given that antidotes are likely to be relatively few in number (*ibid.*, p.63).³⁰

I do not find such a response convincing. The possibility of alien (or far flung) antidotes seems to raise two problems for excluding antidote cases in the characterisation of a disposition. The first problem is epistemic. Given that we lack knowledge of what alien antidotes there might be to a given fundamental disposition, we cannot ever complete the list of antidote cases to be excluded. Perhaps this problem is not metaphysically serious, and we can just accept that our knowledge of the nature of dispositions will always be limited. The second problem concerns the worry mentioned above that excluding antidote cases looks like some form of gerrymandering. Bird suggests that this worry is ameliorated in the case of fundamental properties because scientific progress suggests that the number of antidote cases for a given disposition will be relatively limited. On this basis, even if we should take the building-in of antidote cases into the characterisation of a disposition to be gerrymandered, it will be relatively harmlessly so. However, given the possibility of alien (or far flung) antidotes (for fundamental dispositions), there does not seem to be any grounds to the claim that the number of antidote cases is low; we simply cannot know whether or not this is in fact the case. If this claim cannot be maintained, then there are no grounds for maintaining that the apparent gerrymandering of dispositions in the fundamental case is harmless—this problem applies as much to the case of fundamental dispositions as it does to any others.

A more general worry I have about characterising dispositionality in terms of stimulus-manifestation pairs is that it stands at odds with the notion of mutual manifestation. According to the stimulus-manifestation conception, dispositions 'stand-by' as it were, waiting to be 'set off' by the appropriate stimulus. This model fails to adequately capture all sorts of phenomena which look to involve dispositionality. Martin (1983, p.522) gives the example of two playing cards leant up against one another as one would place them when building a house of cards; whilst this certainly looks like an instance of dispositions producing some manifestation (mutual support), the prospects of identifying one card or the other as providing the 'stimulus' seems slim. Mumford has more recently rejected this model, and offers the example of procreation (2013, p.16); when a sperm and an egg come together and produce an embryo, it does not look like we ought to attribute

³⁰ The central issue in the gerrymandering worry regarding non-fundamental dispositions, such as, for instance, fragility, is that they could be antidoted in so many different ways that a characterisation of the sort in the quotation above will start to look far from natural.

the disposition to do so to one of them and characterise the other as simply the stimulus. Rather, manifestation comes about due to mutual and reciprocal action of the various dispositions involved.

Characterising the distinction between disposition and quality/categorical property in terms of the former relating, of necessity, a particular stimulus and particular manifestation in a particular fashion; and the latter of doing so, if at all, only contingently, faces similar objections to the attempt to do so through reference to conditionals: antidotes and finkish cases threaten the analysis, and it fails to accommodate the mutual and reciprocal nature of manifestation.³¹ If, as has been suggested, it is not appropriate to characterise dispositions in terms of stimulus-manifestation pairs, then the distinction between these and qualities/categorical properties should not be drawn by reference to such pairs.

2.3 Quiddities

Whilst the account discussed above in section 2.2 defines qualities/categorical properties negatively, as non-dispositional-properties, Bird does also suggest that a positive account according to which a categorical property is one which has a quiddity is also possible (2007, fn.38). He has since adopted this position, stating:

Powers contrast with *categorical* properties. The latter I take to be sparse properties that do not have any essential properties beyond self-identity (and, maybe, their degree of polyadicity). (2013, p.27)

On such an account, categorical properties are to be distinguished from other sorts of property on the basis that they alone have trivial essences; that they are *quiddities*, properties whose identity is fixed primitively.³² As a disposition includes in its essence the dispositional features it bestows on its bearer, its essence is non-trivial, and so dispositions can be distinguished from categorical properties along these lines.³³ As with the previous two accounts, this manner of drawing the distinction renders 'dispositional' and

³¹ See also McKittrick (2013) for an objection that suggests that the stimulus-manifestation model leads to a regress.

³² Brian Ellis holds a similar position. (See, for instance, 2010 or 2012.)

³³ Although, in contrast to the views discussed in sections 2.1 and 2.2, this manner of drawing the distinction is not exhaustive: Bird also countenances the view that there may be some sparse, but non-fundamental, properties which are neither dispositional nor categorical (2013, p.28).

'categorical' mutually exclusive; no property could be such that its essence is both trivial and non-trivial.

Jacobs (2011) also makes a connection between qualitativity and quiddity. However, he takes qualities to be *thick quiddities*. Whilst a quiddity in Bird's sense of the word is an entity whose essence is exhausted by self-identity, numerical one-ness, a thick quiddity has some sort of distinctive nature, and so "[t]hick quiddities differ from each other, not merely numerically, but by nature" (*ibid.*, p.90). Jacobs goes on to characterise the sort of nature that a thick quiddity has by reference to phenomenal qualities or qualia—the intrinsic nature of a property which is a thick quiddity is in some important sense similar to the qualities of which we are directly aware in conscious experience.

I shall delay further discussion of the notion of qualities/categorical properties as quiddities, thick or not, until after the next section; for the role that this concept ought to play in the discussion of dispositionality and qualitativity/categoricity can be most clearly seen when examined alongside the material discussed below.

2.4 Directedness

Dispositions are often characterised as properties which are directed towards a certain manifestation or set of manifestations. To possess a particular disposition, such as fragility, is to be directed towards behaving (and not behaving) in certain ways when in the presence of other dispositions. Some have considered this directedness to be akin to the intentionality often taken to be exhibited by mental states (see, for instance, Martin and Pffieffer (1987); Molnar (2003), and Place (1999)). I discuss the relationship between dispositionality and intentionality further in section 11.1 of this thesis; nothing discussed in this section will turn on how similar the directedness of dispositions is to that of intentional mental states, and so on this question I shall for now remain neutral.

Molnar offers the following two characterisations of dispositions (or powers, in his terminology) and qualities or categorical properties:

(2.v) disposition: "a property that is essentially directed to a specific manifestation" (2003, p. 155);

(2.vi) categorical property/quality: "a property that is not essentially directed to a specific manifestation" (*ibid.*).

It is worth noting that the distinction here is not drawn in terms of directedness per se, but with regards to whether or not that directedness is *essential* to the property; whether the property could be the very property it is without directing its bearer in the manner that it does. That a disposition is, of its essence, directed towards some particular manifestation or set of manifestations seems uncontroversial. Indeed, the very concept of dispositionality seems analytically related to the notion of being directed towards a manifestation. To be dispositional is, at least, to *be disposed to* *x*, *y* or *z*. Once again, categorical properties/qualities are defined negatively, as non-dispositional properties; Molnar says of qualities that they are "either not connected to anything beyond [themselves] or [are] contingently connected" (*ibid.*). That a property, in order to qualify as a quality, must not be essentially directed towards a manifestation (or set thereof) seems to me far less clear. It certainly does not seem that the concept of qualitativity is analytically related to not-being-directed in manner equitable to the way in which the concept of dispositionality is related to being-directed. Perhaps it is the case that qualities, if they do bestow some directedness on their bearers, only do so contingently. But the notion of a quality which does so necessarily at least makes sense, in a way that the notion of a disposition which is only contingently directed does not.

Being essentially directed towards some manifestation or set of manifestations is, I contend, an appropriate characterisation of what it is to be a disposition (albeit a fairly minimal one). However, there is a disparity, noted above, between this characterisation and that given of qualitativity/categoricity. Therefore, we are not compelled, on the grounds of accepting (2.v), to also accept (2.vi). I contend that we *ought not* to accept (2.vi). Accepting qualitativity as characterised in (2.vi) has dissatisfactory consequences.³⁴ Suppose we do accept both (2.v) and (2.vi). First, there is a sense in which such an approach begs the question against the Limit View, for it cannot be that any property meets both (2.v) and (2.vi), on pain of contradiction. Sympathisers with the Limit View will, on this count, find the characterisation unsatisfying, although critics might take the inconsistency as evidence that there is something ill-formed about the Limit View. However, there is a more general problem: accepting (2.v) *and* (2.vi) elides the differences between dispositionalism and the Limit View. For both views accept that all real properties

³⁴ These consequences may well also follow from any approach to characterising the dispositional/qualitative distinction which does so contra-distinctively; but I am examining them at this juncture as (2.v) *does* seem to successfully characterise dispositionality, whereas the approaches examined in sections 2.1 and 2.2 did not.

are (2.v)-properties. And both views accept that there are no (2.vi)-properties.³⁵ However, there does seem to be something at stake between dispositionalism and the Limit View. What is at stake might be cashed out in terms of *purity*: the proponent of the Limit View will agree that all real properties are (2.v)-properties, but not that this characterisation exhausts their nature: they are not purely (2.v)-properties.

It is worth noting that anyone, including the proponent of the Limit View, can accept (2.vi) as a coherent characterisation. What the proponent of the Limit View will deny is that there are any (2.vi)-properties. And they will affirm that whilst all real properties are (2.v)-properties, (2.v) fails to fully or exhaustively capture the nature of a real property. I follow Martin and Heil in taking these claims to amount to the claim that all real properties are both dispositional and qualitative. However, should the reader find themselves particularly attached to the idea that (2.vi) *does* properly characterise qualitativity, it may be that their disagreement with the Limit View is primarily terminological. That is, if one really wants to define 'quality' as 'non-disposition'; then one is free to do so. But if that is the choice one makes, then I suggest the Limit View can still be sensibly interpreted as something like the denial that there are any (2.vi)-properties and the assertion that whilst all properties are (2.v)-properties, this characterisation is not exhaustive: there is more to a property's nature than what it is essentially directed towards. I would call this something more qualitativity, and shall continue to do so; but it could be called something else.

Specifying the Limit View as above raises the questions of how exactly this 'something more' ought to be characterised; that is, how the distinction between what is dispositional and what is qualitative should be spelled out. Minimally, the characterisation of qualitativity that I have been hinting towards would look something like this:

(2.vii) quality: a property that is something other than essential directedness to a specific manifestation.

(2.vii) and (2.v) are not mutually exclusive: something can be essentially *x* and also something other than *essential-x-ness*: man, for instance, may be essentially mortal, but this does not mean man's nature is exhausted by his mortality (perhaps man's nature also includes rationality or morality or some other feature). However, (2.vii) does accommodate what might be the driving intuition behind the various attempts to characterise the distinction between dispositionality and categoricity/qualitativity contra-distinctively and

³⁵ Perhaps, categoricalism will hold that all properties are (2.vi)-properties.

mutually exclusively: when we attend to the qualitative nature of some object, we are not primarily concerned with how that object will behave (with how the properties of that object are directed towards various potential manifestations). Furthermore, (2.vii) does not beg the question against any particular view: those who take properties' natures to be exhausted by their dispositionality can deny that there are any (2.vii)-properties; those who take properties' natures to be non-dispositional can hold that all properties are (2.vii)-properties (for (2.vii) allows for the property to be either not directed at all, or to be directed non-essentially, as well as allowing for essential directedness); those who hold that there are both (2.v)- and (2.vii)-properties and that these are ontologically distinct classes of property can be accommodated; as can proponents of the Limit View who hold that all real properties are characterised both by (2.v) and (2.vii). That all parties to the debate can be accommodated by characterising dispositionality and qualitativity according to (2.v) and (2.vii) lends support to these characterisations.

(2.vii), however, says nothing about how to elaborate on the 'something other' than directedness towards a manifestation that a quality is. Below I want to make some suggestive remarks about how one might conceive of qualitativity in more positive terms. A quality, as I understand the term, makes some contribution to its bearer in terms of an intrinsic what-it-is-like-ness. This intrinsic what-it-is-like-ness is, in some sense, independent of the directedness (one could term this the what-it-will-do-ness) which is characteristic of dispositionality. The defender of the Limit View will not, of course, consider this independence to be of ontological strength. Qualities can be the contents of, inform or feature in our experiences; our primary mode of access to them is through phenomenal experience (I shall discuss the relationship between qualitativity and mentality at much greater length in Chapters Eleven and Twelve of this thesis). This is not to say that all qualities are mental entities, or that every instance of a quality is an instance of experience. Perhaps this makes qualities thick quiddities, as Jacobs characterises them (see section 2.3 above); although I am not convinced the notion of a thick quiddity is any clearer than the intuitive grasp we have a qualitativity.³⁶

Dispositions bestow on their bearers a nature which directs how that object will behave. Qualities bestow on their bearers an intrinsic character beyond this directedness. These notions are therefore conceptually distinct. But they are not incompatible; there is

³⁶ See Heil (2010) for an argument that the qualitative grounds the identity of the dispositional or powerful, something that, if qualitativity is to be associated with quiddity, it seems well equipped to do.

no prima facie inconsistency between the claims that a single property is both a (2.v)-property and a (2.vii)-property.

2.5 Purity

There is a sense, however, in which the dispositional and the qualitative represent two mutually exclusive classes: when we are considering *pure* dispositionality and qualitativity. A property could be considered a pure disposition according to the following characterisation:

(2.viii) pure disposition: a property that is essentially directed to a specific manifestation, and is nothing over-and-above this directedness

whereas a pure quality would be:

(2.ix) pure quality: a property that is essentially not directed to a specific manifestation

that is, a property such that, of its essence, bestows no directedness towards behaviour on the object that instantiates it. Martin characterises such a property as one which is "in pure act[...] always manifesting all of which they are *capable*" (2008, p.54). He claims that only the properties of abstracta, such as mathematical entities, could be in pure act (*ibid.*). Clearly, no property can be both a (2.viii)-property and a (2.ix)-property. Indeed, the Limit View claims that no natural property is *either* a (2.viii)-property *or* a (2.ix)-property, for "in this matter, *nothing* is pure" (2008, p.68). In the next chapter, I shall be providing an in-depth excavation of Martin's writings on the Limit View, in which the arguments supporting this claim shall be examined.³⁷

³⁷ The material in this chapter has not been exhaustive, but I have tried to cover the most common approaches towards drawing the distinction. See also, for instance, Lowe (2006a, section 8.5) for an account which takes the distinction to be one of modes of predication which is grounded in his four-category ontology.

Chapter Three: The Limit View: An Archaeology

Martin first introduced what he later came to call the Limit View in his (1984) paper ‘Anti-Realism and the World’s Undoing’. This thesis remained central to the work he produced over the following twenty-three years, and, as can only be expected, the thesis, and Martin’s manner of expressing it, evolved over that period. This chapter presents a largely non-critical and theory-free exposition of the Limit View that tracks both the development of the ideas which comprise the thesis and the changes in the modes of expression employed by Martin—more often metaphorical than not—in expounding the Limit View. The purpose of this chapter is not interpretative, and whilst what follows is intended primarily as a record of the changes in Martin’s presentation of the Limit View from 1984 until his death in 2008, naturally some analysis—especially of the metaphors Martin employed in his characterisation of the Limit View—is inevitable. Such analysis will, in this chapter, be limited to exploring the various ways in which these metaphors can be interpreted: in this chapter I will not be arguing for any particular interpretations above others.³⁸

The motivations for including a presentation of Martin’s position in such a non-critical way are threefold. First, given the centrality of the Limit View to this thesis it is apposite that a full account of its development be presented. A clear presentation of the raw material (and nowhere in Martin’s own work, nor in the work of his critics, is such an account to be found) which is to be analysed is key to motivating a faithful and suitably nuanced interpretation. Secondly, given the changes in the presentation, and perhaps also substance, of the Limit View, a thorough, non-interpretative exposition of the view such as follows is necessary to avoid confusion regarding just what is being discussed.³⁹ Thirdly, in Chapter Four of this thesis I argue that the majority of the criticisms levelled against the Limit View (for example, those presented by both Armstrong and Place in Crane ed., 1996) are the result of *misinterpretations* of Martin’s work. In motivating both the critical interpretation of the Limit View which will be argued for later in this thesis and such a response to Martin’s critics, it will be helpful to have recourse to the a-critical and non-

³⁸ I shall be presenting an interpretative exegesis of the Limit View in Chapter Six of this thesis.

³⁹ It has been argued that Martin presents at least two fully distinct positions under the name Limit View—see Molnar (2003 sections 9.2.2 and 9.2.5).

interpretative exploration of the development and presentation of the Limit View. It is the business of this chapter to provide such an exploration.

3.1 The Birth of the Limit View

I have already presented a brief survey of various positions taken in the debate between categorical and dispositional properties, and outlined the terms of this debate (see Chapters One and Two of this thesis). The Limit View represents (at least) one more position in this debate. Martin (1984) presents a number of arguments against the reducibility of the dispositional to the categorical. These arguments primarily target Dummett's claim that for statements ascribing dispositions to objects to be determinately truth-evaluable, they must be reducible to a set of non-dispositional "reports of observation" statements. These reports of observation, Dummett claims: (i) provide grounds for a convincing causal explanation of the disposition in question, and (ii) are necessary and sufficient for the truth of the disposition ascription in question (1979). Although Dummett is the focus, Martin holds that the arguments he presents against Dummett hold equally against a variety of positions loosely classifiable as verificationist (1984, p.3).

Briefly, these arguments highlight the difficulty in giving explanations of so-called categorical states in language that are completely free of disposition-laden talk (*ibid.*, p.9) and a *reductio ad absurdum* of the claim that, once dispositionality is taken seriously, there could be any contingent identification of dispositional states with categorical states (*ibid.*, pp. 9-10). The argument runs as follows: if categorical and dispositional states are only contingently identified, then two worlds could differ *just* in terms of how the dispositions and qualities match up. However, this difference seems to lack any explicable ground. How could it be that the very same property could be the truthmaker for a certain disposition ascription in one world and fail to be so in another? Either one accepts that if dispositions and categorical properties are to be identified, they must be necessarily identified, or else one must accept this brute difference between worlds, which lacks *any* difference maker.⁴⁰

⁴⁰ Whilst I agree with Martin that the relationship between the dispositional and the qualitative cannot be contingent, I am not sure this argument provides the best support for that claim. However, I include it here to illustrate the lines along which Martin was thinking at this time. (See Heil (2010) or (2012, section 4.11), for further arguments in support of this claim.)

He appends to the rejection of the reducibility of the dispositional to the categorical the claim that dispositionality is found “all the way down” (*ibid.*, p.11):

the only things that do not have dispositional properties (that lack potency and are in pure act, as St. Thomas would say) are God, if He exists, and numbers, if they exist. All the way down, even to neutrinos, or elementary aspects of fields, nothing manifests all that it is capable of at any moment or segment of space time. (*ibid.*)

In an endnote following this claim, there appears the following statement:

Any real, empirical property has its categorical and dispositional aspects. (*ibid.*, p.20)

This statement is given no further analysis, explanation or development. Despite the brevity of its treatment, the above statement is the first formulation of what Martin would later go on to call ‘the Limit View’.⁴¹ Given this very minimal introduction to the Limit View, little more can be said regarding the commitments that such a view entails than the following:

(3.i) dispositionality is not reducible to categoricity;⁴²

(3.ii) dispositionality exists at all levels of reality;⁴³

(3.iii) there are no properties such that they lack a dispositional aspect;

(3.iv) there are no properties such that they lack a categorical aspect.

At this point, neither (3.iii) nor (3.iv) is supported by adequately motivated arguments. Martin provides arguments for (3.i) and (3.ii) as detailed above. However, neither (3.i) nor (3.ii) individually, nor their conjunction, entails the truth of either (3.iii) or (3.iv). For instance, it is consistent with both (3.i) and (3.ii) that the world could contain some irreducible *purely* dispositional properties, and some irreducible, *purely* categorical properties, standing in various relations to each other. However, this is inconsistent with (3.iii) and (3.iv), and so these are not entailed by the (3.i) and (3.ii). Just as (3.iii) and (3.iv)

⁴¹ He refers back to the theory put forward in Martin (1984) as “The Limit View of properties” in Martin (1993b, p.182). Although, that said, he later goes on to reject the name. And then later still continues to use it. In this thesis, I will use the term Limit View as a general term for Martin’s thes(is/es) that ‘dispositional’ and ‘categorical’ do not perfectly pick out discrete and separable properties—at this point I mean this in the loosest possible terms, exactly what the meat and bones of such a position(s) may be is the subject matter of what is to come in this chapter.

⁴² It is important to note that, at this stage, the arguments presented by Martin do *not* entail the inverse of this statement, that ‘categoricity is not reducible to dispositionality’.

⁴³ Again, Martin’s claim for this does not entail the existence of categoricity at all levels of reality.

are wanting of supporting arguments, so too is the notion of property ‘aspects’ introduced in the quotation given above wanting of explanation. The attempt to appropriately articulate this notion (which Martin eventually goes on to reject, 1996) is considered in the next section of this chapter, whose focus is Martin’s two 1993 papers ‘The Need for Ontology—Some Choices’ and ‘Power for Realists’.

3.2 The First Phase of the Limit View: Aspects and Sides

In (1993a) and (1993b), Martin offers his first detailed accounts of the Limit View. In the previous section we noted that, whilst Martin had provided arguments for the existence and irreducibility of dispositions, this is not enough to establish the commitments of the Limit View outlined above. There being some irreducible, *purely* dispositional properties, and some irreducible, *purely* categorical properties is consistent with what *has* been argued for, but is inconsistent with the (at this stage, merely asserted) Limit View. Martin (1993b) addresses the first of these two potential phenomena: purely dispositional properties. To explain all properties in terms of pure dispositionality, Martin argues, would render an account where:

[E]very ‘is’ is replaced by a ‘would be’. Each categorical property that would be manifested by some purported dispositionality is itself a candidate for replacement by some further dispositionality. It is hard to model a real *happening* on such an account. (1993b, pp. 177-178)

The force of this argument is that if properties are modelled only as *pure* dispositionality, pure potential for manifesting the currently unmanifested, we are never left with any concrete, determinate, actual properties. Rather, such an account merely furnishes us with potentialities for further potentialities for further potentialities etc. etc. Such a position seems to preclude the very *possibility* of ontological candour; in response to questions such as ‘what is there?’ or ‘is there an *n*?’ the only possible answers would be of the form ‘well there might be if...’. The issue here is *purity*. If the essence of every property is exhausted by its directedness towards some manifestation, then nothing seems to be enacted when dispositions manifest. The state of the world is one of shifting potentials, but potentials for what? To answer this question, we could only make reference to further directednesses, raising the very same question again (and so on). This sort of position is not necessarily incoherent.⁴⁴ However, it seems to clash with the immediate data of our manifest

⁴⁴ Blackburn (1990) presents an argument to suggest it is incoherent, and Holton (1999) offers a response, arguing the position is undeniably strange, but *is* coherent.

experience, which may render it unattractive to some. Furthermore, Martin suggests that such an account lacks ontological seriousness (*ibid.*, p.178), and, if he is correct, this will make the position unsatisfying to any philosophy of an ontologically serious mindset. What is needed is “a categorical state truth-maker for these claims of dispositionality” (*ibid.*). Martin is already committed to the view that whatever this “categorical state” is which will do the truth-making, it cannot, given the arguments he presents in (1984), be a categorical property which is contingently related to the disposition in question.

Having rejected accounting for property in terms of pure dispositionality, Martin reasserts the commitment that properties cannot be thought of as purely categorical; that is, as manifesting at all times all that they are capable of. In both papers he states:

Pure categoricity[/categoricity] of a property or state is as much of a myth and philosophical artifice as is pure dispositionality. (1993a, p.519 and 1993b, p.184)

and:

No intrinsic properties, right down to the ultimate properties of elementary particles or the ultimate properties of spatio-temporal regions of fields, are, in Aquinas' terms, in pure act or purely categorical. They are not and, indeed, cannot be manifesting all of which they are capable. (1993a, p.519 and 1993b, p.184)

The assertion is not at this point argued for, it seems that Martin takes it to be obvious that this is the case.⁴⁵ Eliminating dispositionality; reducing dispositionality; accounting for property in terms of pure dispositionality; accounting for property in terms of pure categoricity, and the combination of these last two have all been rejected. This leads to the Limit View:

Any intrinsic property is Janus-faced, a two-sided coin, and only at the limit of an unrealizable abstraction can one think of these as separate properties in themselves[...] there are no *degrees* within the limit by which a property is categorical or dispositional[...] The categoricity and the dispositionality of a property or property state are abstractly distinct but actually inseparable, and no nonformal property can manifest all its dispositionality simultaneously.

It isn't that an intrinsic property or quality is purely categorical but dispositionality is 'supervenient' on it, for properties are indissolubly categorical-*cum*-dispositional or dispositional-*cum*-categorical. The dispositionality is as basic and irreducible as is the categoricity, and there is no direction from one as basic in a property to the

⁴⁵ Although later in his work, as will be detailed in this chapter, he does provide an explicit argument against properties as pure categoricity.

other as 'supervenient'. To separate one from the other as the really basic property is philosophical artifice and error. (1993b, p.184)⁴⁶

The passage is dense, and suggests commitment to a number of positions. The next few paragraphs will be dedicated to unpacking the Limit View as articulated in the passage quoted above. In what comes below it is important to note a subtle difference between Martin's use of language in the above passage, and the terms the debate is normally couched in—Martin does not talk of 'dispositional properties' and 'categorical properties', but rather of the 'dispositionality' and the 'categoricity' of properties—property for Martin is not neatly divided into two types, but rather, what are taken to be type-terms in the debate are treated as feature-terms or aspect-terms which tell us something about a unitary phenomena: property.

The passage opens with two visual metaphors which are intended to elucidate how, under the Limit View, properties are to be considered: 'Janus-faced' and as a 'two-sided coin'. One consideration such metaphors bring to light is mereological. When we conjure up an image of the Janus-faced figure, or of a coin with 'heads' and 'tails' sides, it seems that each of the faces or sides can be thought of as a part which, along with its counterpart (and perhaps some other parts) *composes* the whole. This seems to suggest that perhaps the dispositionality and categoricity of an intrinsic property, if they are like the faces of Janus or the sides of a coin, ought to be considered in a mereological fashion, as parts which make up a composite whole property. If we take the metaphors of the coin and the Janus-faced figure to apply at the ontological level, as telling us something about the fundamental nature of the different aspects of properties and the relationship between them, then the mereological interpretation seems apt.

Another interpretation of these metaphors can be motivated if we consider them as applying at the conceptual level, as revealing something about the very notions of 'dispositionality' and 'categoricity'. Like the Janus-faced figure, whose gaze is cast always in contrary directions from a single point, perhaps we are to understand the notions of dispositionality and categoricity as always 'projecting' towards contrary conceptions of the single property from which they both spring. There is an intimate link between what can be said about the two sides of a coin; for instance, to say a coin landed heads-up has the implication that it landed tails-down, indeed it *could not* land heads-up without landing tails-down. Perhaps, then, the coin metaphor could be interpreted as elucidating the

⁴⁶ An almost identical passage appears in Martin (1993a, p.519), although this passage omits the final sentence of the first paragraph.

nature of the link between the dispositional and the categorical; just as there are strict implications between the ways a coin lands, perhaps there are strict implications between having a certain dispositional nature and have a certain categorical or qualitative nature. At this stage it is not my intention to endorse a particular interpretation of these metaphors, and nor do I imagine that what appears above is an exhaustive account of how they might be interpreted. In giving a few plausible and intuitive examples of alternative (and not necessarily mutually exclusive) interpretations, it can be seen that the articulation of the Limit View offered by Martin in these works is in need of careful and sensitive analysis.

Martin also characterises the Limit View in the following ways:

only at the limit of an unrealizable abstraction can one think of these as separate properties in themselves[...] (*ibid.*)

The categoricity and the dispositionality of a property or property state are abstractly distinct but actually inseparable[...] (*ibid.*)

To separate one from the other[...] is philosophical artifice and error. (*ibid.*)

The quotations above suggest that the case of supposed distinction between dispositional and categorical properties does not reflect the way the world really is. The distinction is somehow a product of our way of thinking of, perceiving, conceptualising, representing, treating, understanding, etc. etc. properties that cannot really be classified as purely dispositional or purely categorical: properties somehow inevitably involve *both* categoricity and dispositionality.⁴⁷

The key to understanding this appears to be ‘abstraction’, a concept mentioned twice by Martin in the passage above. When we take a property to be either purely dispositional, or purely categorical, we are not considering the property in its entirety. In the first case we have abstracted away all but the potential the property has for as yet unmanifested manifestation; in the second it is precisely this that has been abstracted, and we conceive of the property as inert being. If we come to hold that such abstractions are in fact accurate representation of how properties really are, then we are guilty of philosophical artifice and error. This manner of characterising the Limit View seems at odds with the first potential interpretation of the Janus-faced figure and coin metaphors as attributing a sort of mereology to intrinsic properties, where they are composites of dispositional and categorical parts. If the distinction between the dispositional and the categorical is one which obtains at the abstract level, but not at the ontological level, then

⁴⁷ Martin does not make it clear through which faculty or faculties this distinction between the categorical and the dispositional is realised.

it is hard to see how dispositionality and qualitativity could be two parts of one composite whole.

Martin further outlines the sort of ontology he envisages for properties as conceived under the Limit View:

It isn't that an intrinsic property or quality is purely categorical but dispositionality is 'supervenient' on it, for properties are indissolubly categorical-*cum*-dispositional or dispositional-*cum*-categorical. The dispositionality is as basic and irreducible as is the categoricity, and there is no direction from one as basic in a property to the other as 'supervenient'. (*ibid.*, p.184)

The intimacy of the connection between dispositionality and categoricity is asserted in this quotation. The claim that properties are "indissolubly categorical-*cum*-dispositional or dispositional-*cum*-categorical" suggests that an account of the Limit View which takes dispositionality and categoricity to be parts of a composite property-whole is misguided.⁴⁸ Whilst Martin omits to articulate precisely how we are to understand the connection between dispositionality and categoricity, he does reject a number of ways we might understand it: first, the quotation makes clear that we ought not to consider one as supervening on the other; secondly, given their equiprimordiality, there is no scope for one being reducible to the other; thirdly, for this same reason, one cannot be seen as emergent from the other and fourthly, one cannot be seen as standing to the other in the relation of cause to effect.

The articulation of the Limit View provided in Martin (1993a) and (1993b) provides some hints towards how to understand the ontology of properties (albeit in the form of somewhat ambiguous metaphors) and some clear strictures regarding how *not* to understand it. In the next section I will examine what I take to be the 'second phase' of the Limit View—that laid out in Martin's contributions to *Dispositions: A Debate* (Crane, ed., 1996).

⁴⁸ The comment that "there are no *degrees* within the limit by which a property is categorical or dispositional[...]" (1993b, p.184) also seems to support this point. If such an interpretation were correct it would be natural to suppose that a composite property-whole could have a 'bigger' categorical part than a dispositional part, and vice versa. Another consequence of this comment is that we ought not to consider dispositionality and categoricity as two ends of a continuum (perhaps as we might see 'left' and 'right' in politics), with different properties being plottable as different points on that continuum.

3.3 The Second Phase of the Limit View: Abstraction and Artifice

Martin presents several more arguments in favour of the reality and irreducibility of dispositions (and so contra categoricallist accounts) in Crane, ed. (1996).⁴⁹ The first is a response to attempts to explain macro-dispositions (such as fragility and solubility) in terms of the micro-structural properties of the entities that instantiate them. Martin argues that as structural properties are *themselves* intrinsically dispositional, there is little hope for employing them as a reduction base for dispositions in general (*ibid.*, p.73). The second defends the status of dispositions that never manifest, focussing on the example of two spatio-temporally distant types of elementary particles which would interact in an idiosyncratic fashion were they to come into contact with each other, but never actually get to meet. It seems that in such a case we would not want to deny these particles their dispositions for these never-manifested manifestations (*ibid.*, p.74). The third argument Martin presents is a direct attack on pure categoricism:

When [Armstrong] goes on to say ‘Martin might claim that such a world [one where properties have a categorical but not a dispositional side] would be an inert world, because it would be a world which lacked causality’[...], he is correct in thinking that Martin would claim that an *inert* world was possible but that a world or entity or property with no dispositionality was *not* possible. To say that a thing or property was *intrinsically* incapable of affecting or being affected by anything else isn’t just a case of inertness and it amounts to *no*-thing. (*ibid.*, p.132)

In this passage Martin makes a direct link between being and having some measure of dispositionality; the purely categorical does not exist, because even if it did, it would be a mere nothingness! The difference between an inert world and nothing, then, would be that in an inert world there were entities with dispositions ready to manifest, but the world is such that those conditions upon which the manifestation of these dispositions would be triggered can never occur.

Martin concedes that the pure dispositionalist account of property has “at least a degree of plausibility” which is enhanced, it is argued, by the “impossibility[...] of characterising any property as purely qualitative,” (*ibid.*, p.60) as argued for above. However, Martin does go on to reject this position on two grounds: first by employing an argument similar to the one detailed above given in Martin (1993b), that to consider a property as purely dispositional would be to consider it as merely a propensity for some outcome, a “mere mathematicised measure” (in Crane, ed., 1996, p.73). Any such measure

⁴⁹ I shall provide only a very brief survey of these arguments here. (For a full account see Chapters 5 and 8 of Crane, ed. (1996), especially pp. 73-74 and p.132.)

“is such only in virtue of there being qualities *for* which or of which it is the quantity or measure. The alternative is an unacceptably empty desert of Pythagoreanism...”⁵⁰ Accepting qualitativity/categoricity is necessary to establish concrete being. The second response that Martin gives to the pure dispositionalist runs as follows:

Martin’s response to any such account is to state it fairly but baldly and let its absurdity show through.

The image of a property as *only* a capacity for the production of other capacities for the production, etc. is absurd, *even* if one is a realist about the capacities. Whether one takes this argument as just question-begging or revealing a *reductio ad absurdum*, the opponent cannot plead misrepresentation. (*ibid.*, p.86)

The grounding for the Limit View of properties Martin gives here is the same as that given in (1993a) and (1993b). Martin has argued that both pure dispositionalism and pure categoricism must be rejected, and so some alternative account of the nature of properties must be given.⁵¹

Martin (1996) gives the following articulation of the Limit View in Chapter 5, and repeats it early in Chapter 8:

Martin’s Limit View of the qualitative and dispositional character of properties is the following three claims:

- To speak of a qualitative property is to take some real property as *only* at its bare potency-free purely qualitative limit, which, of course, it never is.
- To speak of a dispositional property is to take some real property as *only* at its purely dispositional non-qualitative limit which, of course, it never is.
- No real property of an object, event, process or even space-time segment or field can be thought of as existing at *either* limit.

The thought of anything being at either the limit of the purely and only qualitative disposition-free pure act of being (such as the potency-free qualities of the God of Thomas Aquinas) or the limit of the pure state of potency (such as the qualities-for-reduction-to-possible-operations of a thoroughgoing operationalism or qualities as measurement-probabilities ‘bundles’) is conceptual artifice and unrealisable

⁵⁰ Martin at this point begins to use the terms ‘quality’, ‘qualitative’ and ‘qualitativity’ in place of ‘categorical property’, ‘categoricity’ and ‘categoricity’. The reasoning behind this is that to juxtapose ‘dispositional’ with ‘categorical’ is suggestive that the having of some dispositionality by an object may be a somehow less-than-categorical-fact, an insinuation that Martin wishes to avoid (in Crane, ed., 1996, p.74).

⁵¹ In (1993a) and (1993b), the rejection of categoricism was merely asserted; here it is argued for explicitly, as outlined above.

abstraction suggested, perhaps, by some of the surfaces of grammar. (*ibid.*, pp. 73-74)

In this passage Martin provides a much clearer exposition of the commitments of the Limit View than was given in the passages quoted in the previous section of this chapter. He omits the visual metaphors of the Janus-face and the two-sided coin, which as we have seen are open to myriad interpretations. He also avoids the terminology of ‘aspect’ and ‘side’ which had appeared in earlier work. Rather, the focus here is on ‘limits’. However, the notion of a limit, where real properties are concerned, is one which requires explanation.

Could ‘limit’ be interpreted in a physical or visual fashion, as two ends of a scale or spectrum, or perhaps the outer bounds of a region? Remembering that there are no degrees between the limits, this seems unlikely. Properties are not such that they can be conceived of as composites which could have a ‘bigger’ categorical part than a dispositional part, and vice versa; nor are dispositionality and categoricity two ends of a continuum with different properties being plottable as different points on that continuum. Perhaps then ‘limit’ applies to the conceptions which the property admits of. We are discouraged from thinking of two types of property juxtaposed one with the other, and encouraged to see the binary division of dispositional/qualitative as stemming from a process of "conceptual artifice and unrealisable abstraction" (*ibid.*, p.74). When the abstraction of one element—either the qualitative or dispositional—from the conception of the property is thorough and complete, we find ourselves at a ‘limit’; all that is left is the pure form of its counterpart. In this way, pure dispositionality and pure qualitativity are the conceptual ‘limits’ of which the property admits. But to consider that such pure qualitativity or dispositionality is grounded in some *purely* qualitative or dispositional property would be erroneous. The account of the Limit View given in the passage above leaves open the question of exactly what sort of relationship obtains between the dispositionality and qualitativity of a property.⁵²

In the previous section of this chapter, a number of interpretations of Martin’s Limit View were considered which rendered dispositionality and qualitativity somehow parts which make up a composite property-whole. Whilst I have already discussed some

⁵² Martin repeats the passage quoted on page 42 of this chapter, which detailed various ways that dispositionality and qualitativity of a property are *not* related and so we can take the exclusion of these relations to still apply in the account given here (1996, pp. 132-133).

reasons to think such an interpretation might be in error, in Martin (in Crane, ed., 1996) he explicitly rejects this conception of the Limit View:

The only way to express this Limit View of real properties that does not amount to treating real properties as compounds of purely qualitative and purely dispositional properties is to show how the attempt to abstract these as distinct elements is unrealisable in reality and only approachable as *limits* for different ways of being the same unitary property such that they may be necessarily or contingently co-variant. This will hold for all real properties all the way down even to the most ultimate properties of elementary particles or fields. (*ibid.*, p.86)

Any interpretation of the Limit View as articulated in by Martin in Crane, ed. (1996), then, cannot take the terms 'dispositionality' and 'qualitativity' to denote different parts which compose a property-whole. This passage also reveals a little more about what relations may hold between the dispositionality and qualitativity of a property: Martin claims that change in the one will result in some change in the other. However, it remains an open question as to whether this co-variance is bound by ties which are necessary, or merely contingent.⁵³ He expresses the same openness about the relations that hold between the dispositionality and qualitativity of a property on the following page:

The Limit View has maximum flexibility in expressing both the necessary (if any) and contingent (if any) relations between qualitativity and the dispositionality of properties[...]

Necessities will have to be earned but so will contingencies. The Limit View is specially suited for the statement of either or a judicious *mixture*. (*ibid.*, p.87)

So far, we have only been provided a negative account of what exactly the relationship between the two features of property under discussion might be. Martin gestures towards a positive account, by means of analogy, later in the text:

The dispositionality and qualitativity of any intrinsic property is similar to the way shape and size are of *extension*. In each case, one cannot exist without the other, though one can *vary* without the other. *Contra* Hume and Armstrong, they are distinct but not separable...

On the Limit View one must logically exclude separability and affirm the necessity of co-existence of dispositionality and qualitativity for any property, but then one is free on any given case whether their co-*variance* is necessary or contingent. (*ibid.*, pp. 133-134)

⁵³ Given Martin's argument in (1984) that dispositions and categorical properties cannot be contingently *identified* one with the other, on pain of invoking some 'magical' difference maker between possible worlds, it might be thought that he cannot allow contingent co-*variance* either, without falling foul of the same problem.

No extended thing can have a shape without having some size, and nothing can be of an extended size without having some shape or other. However, there are many things of the same shape (for instance, many square things) which have different sizes, and conversely, many things of the same size (say, things with a volume of 10cm^3) which nevertheless have differing shapes. Accepting this:

(3.v) No property can have qualitativity without having some dispositionality;

(3.vi) No property can have dispositionality without having some qualitativity;

(3.vii) There are properties which have the same qualitativity but nevertheless have different dispositionality;

(3.viii) There are properties that have the same dispositionality but nevertheless have different qualitativities.

The co-variance (whether necessary or contingent) of dispositionality and qualitativity *in general* is ruled out by such an account. However, given the last line of the passage above, we can see that Martin permits that on a case-by-case basis there can be particular properties for which co-variance obtains between their dispositionality and qualitativities, but that whether such co-variance is necessary or contingent is to be decided in each instance, not dictated by a general rule.

Earlier in this section and in the previous section 3.2 the importance of the notion of abstraction to Martin's account was discussed. One potential way of interpreting the claim that pure dispositionality and pure qualitativity are the products of abstraction would be to consider these two features of properties as simply ways-to-think-about-property. However, Martin explicitly rejects such a conception:

Expressing the qualitativity and dispositionality of any real property merely as 'a way of thinking of, mode of predication concerning, way of regarding, looking at, etc.' suggests that it is merely in the eye or voice of the beholder. If the users of such deontologising expressions wish to claim such anthropomorphism then the users should make *that* ontology clear. If the users do not wish to endorse this anthropomorphism then they should join in the task of saying clearly *what* in the world the expressions indicate. (1996, p.174)

The Limit View is not to be taken as rendering dispositionality and qualitativity a mere mind-dependent way of describing or understanding the world. Martin is concerned with ontological seriousness and candour. For him both dispositionality and qualitativity are as real as the properties to which they pertain. This does set up a puzzle, however: if anti-realism about dispositionality and qualitativity *were* being endorsed then the claims of the

Limit View that these are abstractions would be straightforward and easily comprehended.⁵⁴ Given that this position is clearly rejected, it remains for an account to be given of what it means to maintain both that: (i) pure dispositionality and pure qualitativity are “conceptual artifice and unrealisable abstraction” (*ibid.*, p.74) and, at the same time, (ii) that nonetheless some distinction between dispositionality and qualitativity obtains which is not a merely conceptual or mind-dependent distinction. An attempt to develop such an account is the subject matter of Chapters Five and Six of this thesis.

3.4 The Third Phase of the Limit View: Identity and Gestalts

In two papers ‘On the Need for Properties: The Road to Pythagoreanism and Back’ (1997) and ‘Rules and Powers’ (co-authored with John Heil, (1998)) Martin presents yet another articulation of the Limit View. In the first of these papers he reiterates a number of arguments against reducing dispositions to so-called categorical properties that have been discussed above (1997, pp. 202-203) and rehearses the argument that a purely dispositional account of properties is “like a promissory note that may be actual enough but if it is for only *another* promissory note which is[...], that is entirely too promissory” (*ibid.*, p.215) as well as introducing the claim that any attempt at explaining property in ontologically candid language will be unable to do so in purely dispositional terms (*ibid.*, paralleling an argument given in Martin (1984, p.9) against a purely categorical account of property). Both papers repeat the argument given in Martin (1996, p.132), that a purely qualitative property would not merely be inert, but would be a *no*-thing (1997, p.216) and (1998, p.289-290). As the (1997) paper gives a fuller account of the Limit View than (1998) one, and the two accounts are sufficiently similar, this section shall focus on the former. However, I shall examine one point raised in the latter towards the end of this section which is not addressed in the earlier paper.

Martin (1997) provides some more explanation of the ways in which the dispositionality and the qualitativity of a property relate to one another:

It is my suggestion that the properties of entities that are constitutive of any state of affairs must be qualitative as well as dispositional, and dispositional as well as qualitative. They are correlative (Locke), complementary, inseparable, and covariant when they are displayed in their intrinsic and irreducible form at the level of the “finer interstices.” (p.215)

⁵⁴ Although, for a philosopher such as Martin (or indeed myself) highly implausible!

The inseparability and covariance of the dispositionality and qualitativity are discussed in the section above. Two new features of the relationship between the two are introduced here: correlativity and complementality. The two terms are closely related, but there are some connotations each carries that the other does not.

Correlativity suggests a mutuality in the relationship between dispositionality and qualitativity, such that they are dependent on and affective with regards to one another. Complementality, in the sense relevant here, is the making complete of something. Indicating that dispositionality and qualitativity stand in such a relation, Martin emphasises the intimate nature of the connection between the two: dispositionality and qualitativity are 'incomplete' when considered alone.

The notion of a property's 'completeness' seems to create a tension in Martin's articulation of the Limit View. He has rejected any mereological understanding of dispositionality and qualitativity (see 1996, p.86 and section 3.3 above) and indeed repeats this rejection at (1997, p.216). However, talk about the 'completeness' of a property, if taken literally, seems to imply just such a conception. Hence, the complementality of dispositionality and qualitativity must be read metaphorically, and as such is open to a number of interpretations. Perhaps the metaphor applies at the epistemological level, and to consider only one or the other would be a partial consideration; any complete conception or consideration of a property must recognise both.

Martin recognises and addresses this problem:

[...]characterization in terms of "different ways of being" is still too suggestive of a mixture. It is even more than necessary covariance (as in equiangular and equilateral). For any property that is intrinsic and irreducible, what is qualitative and what is dispositional are one and the same property viewed as what that property exhibits of its nature and what that property is directive and selective for as its manifestations. These cannot be prised apart into the purely qualitative and the purely dispositional. What is exhibited in the qualitative informs and determines what is the forness of the dispositional, and what is the forness of the dispositional informs and determines what is exhibited in the qualitative. There is no direction of priority or dependence. There is no reduction of one to the other. The only way that this can be expressed is by claiming that the qualitative and dispositional are identical with one another and with the unitary intrinsic property itself. This is perhaps a surprising identity, but frequently it happens that different representations turn out to one's surprise to be of the identical entity. (*ibid.*)

The claim at the end of this passage is a bold one: the correct way to understand the manner in which the dispositional and the qualitative relate is via the notion of identity:

(3.ix) The dispositional of a property is identical with that property itself;

(3.x) The qualitativity of a property is identical with that property itself;

(3.xi) The dispositional and qualitativity of a property are identical with each other.

In characterising the dispositional and the qualitative in such a manner, it seems Martin is rejecting the analysis of their relationship as analogous to that of size and shape with regard to extension: if the dispositional and qualitativity of a property are identical one with the other, it is hard to see how claims (3.vii) and (3.viii)—that there are properties with the same qualitativities as one another and yet different dispositionalities, and vice versa—can be maintained.⁵⁵ That the two are to be considered identical does provide grounding for the intimacy of the relationship between the two as discussed earlier in the chapter. Martin goes on to characterise this identity as a ‘surprising’ one, commenting that “frequently it happens that different representations turn out to one’s surprise to be of the identical entity” (*ibid.* p.216). This comment offers some clues as to how we are to understand the identity between dispositionality and qualitativity. Two representations of one entity—say the coding of a single image into both .bmp and .jpg file formats—are not *identical representations*, but they are representations *of* a single entity: in such cases, the .bmp represents ImageA and the .jpg represents ImageB and ImageA=ImageB. Pure dispositionality and pure qualitativity are to be taken somehow as ‘representations’, arrived at by abstraction, of a single, unitary property. Pure dispositionality is not identical to pure qualitativity in that they are not the same manner of representing the single, unitary property (in each case something different about the property has been abstracted), but the two are identical in that that which they represent is a single, unitary and obviously self-identical property. In the passage that follows the quotation discussed above, Martin reminds us that the dispositionality of a property ought not to be seen as a relation between the property and a manifestation (dispositions exist quite independently of their manifestations—*ibid.*). If we were to make this mistake it would be very hard to see how the Limit View could be correct, as there could not be any sort of identity between a

⁵⁵ As a trope theorist, Martin would analyse ‘the same’ in the sentence above as ‘exactly similar’ as opposed to ‘identical’ (as a realist about universals would do). However, I cannot see this allowing him to maintain (3.vii) and (3.viii). If a property P_1 has a qualitativity q_1 , and $q_1=d_1$ (that property’s dispositionality) and another property P_2 has an exactly similar qualitativity q_2 , how could it be that $q_2=d_2$ where d_2 is *not* exactly similar to d_1 ? If this were to be the case, then surely we could not maintain that q_1 and q_2 are exactly similar, for they differ in regard to what d they are identical to.

relation (a property which has, of its essence, an adicity of two or above) and a non-relation (which must necessarily be monadic).

Martin invokes yet another visual metaphor in an attempt to articulate the Limit View which now incorporates the notion of the (surprising) identity of the dispositionality of a property with the qualitativity of that property:

What is qualitative and what is dispositional for any property is less like a two-sided coin or a Janus-faced figure than it is like an ambiguous drawing. A particular drawing, remaining unitary and unchanged, may be seen and considered one way as a goblet-drawing and differently considered, it is a two-faces-staring-at-one-another-drawing. The goblet and the faces are not distinguishable parts or components or even aspects of the drawing, although we can easily consider the one without considering, or even knowing of, the other. The goblet-drawing is identical with the two-faces drawing. (1997, pp. 216-217)

A gestalt image is a single set of markings that can be seen as a representation of more than one thing. Famous examples include the goblet-faces gestalt and the duck-rabbit gestalt. Gestalt images are not a mixture of two pictures—one of a goblet, one of faces or one of a duck and one of a rabbit—but rather, and often as Martin notes, surprisingly, a single image which can be seen in both ways (although usually not simultaneously). We are encouraged to see the dispositional/qualitative distinction in these terms: the property (the gestalt image) is singular and unitary, but can be ‘seen’ or ‘considered’ in different ways as dispositional or qualitative (as faces or a goblet). These considerings, however, do not reveal that the property has “distinguishable parts or components or even aspects” (*ibid.*), but rather reveals a surprising fact about the property: it is both dispositional and qualitative and these are identical—although of course the ‘considerings-as’ are not identical considerings (it is both a drawing of a goblet and a drawing of faces and the goblet-drawing and the face-drawing are identical; although of course the seeing-as-a-goblet and the seeing-as-faces are not identical seeings).

At the end of the previous section we considered an interpretation of the Limit View as holding dispositionality and qualitativity as somehow mind-dependent or merely in-the-eye-of-the-beholder; an interpretation which Martin rejects (1996, p.174). Martin (1997, p.202) repeats this rejection. In encouraging us to consider the distinction between the dispositionality and qualitativity of a property as analogous to the distinction between a goblet and two-faces in the appropriate gestalt, there seems to be a tension in Martin’s account: surely these ways of seeing the gestalt are merely in-the-eye-of-the-beholder. As was stated in the previous section, an in depth look at how this tension can be reconciled is

the business of later parts of this thesis. Consider briefly, however, an abstract image, such as the Rothko (*Orange and Yellow*, 1956) below, and a gestalt:



Fig 3.a

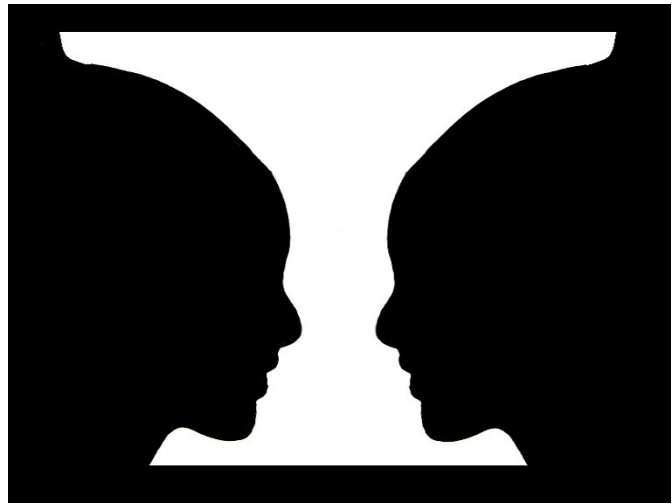


Fig 3.b

Of the Rothko, it could be said: 'I see a sunrise, and a sunset', and equally 'I see both passion and passivity'. Of the gestalt it could be said 'I see a goblet, and two-faces'. There does seem to be a difference between these sets of statements: the two things said of the Rothko seem to be merely matters of interpretation; there is no implication that the painting *is* a picture of a sunrise and a sunset or a picture of passion and passivity. In the case of the gestalt, however, this is the claim. Indeed, this is what makes it a gestalt! The point is brought into even sharper relief if we imagine someone seeing the gestalt in a gallery and saying 'I see both passion and passivity'. This response would not be inappropriate, but is clearly of an entirely different kind to 'I see a goblet, and two-faces'. The latter statement seems to be grounded in something which transcends the speaker's own thoughts or considerings; something about the picture itself.

This is a rough sketch of how we might understand the analogy between gestalt images and the dispositionality and qualitativity of a property without thinking this rendered dispositions and qualities as mere eye-of-the-beholder entities. Martin and Heil (1998, p.289) contains a similar, but briefer, articulation of the Limit View; the analogy of the gestalt is employed, the Janus-face and two-sided coin metaphors rejected. However, identity itself is not mentioned. The next section of this chapter focuses on Martin and Heil's paper 'The Ontological Turn' (1999), where the notion of surprising identity is further explored.

3.5 The Fourth Phase of the Limit View: Identity Explored

Martin and Heil (1999) reiterate a number of points, arguments and positions discussed above: they reject purely categorical properties because these lack both the ability to affect and to be affected; they reject purely dispositional properties because they are merely a potential for a potential for a potential... They also assert the Limit View, the claim that properties have a dual nature that is both dispositional and categorical, rejecting any understanding of this duality in terms of supervenience, dependence or reduction. That dispositionality and qualitativity are *of* properties, rather than *types of* properties is emphasised:

These somethings about the ball are its properties; each endows the ball with a distinctive qualitative character and a distinctive range of powers or dispositionalities. (1999, p.44)

The overall dispositionality and qualitative character of an object depend on the properties it possesses and relations these bear to one another. A ball's sphericity, for instance, gives it (in concert with the ball's other properties) a distinctive appearance and disposes it in particular ways. (It will roll, for instance, and reflect light in a certain pattern.) (*ibid.*, pp. 45-46)

What must be recognised is that it is in virtue of properties—which can neither be genuinely characterised, at the expense of the other, as dispositional or qualitative—that certain dispositionalities and qualitativities arise. Indeed, the macro-dispositions and macro-qualities of objects will be a result of a complex combination of the dispositionalities and qualities which arise from the properties of the objects fundamental constituents (whatever these may turn out to be). Martin and Heil again draw an analogy to the gestalt images to illustrate the relationship between the dispositionalities and qualitativities of a property:

Dispositionality and qualitativity are built into each property; indeed, they *are* the property. The inseparability of a property's dispositionality and qualitativity is analogous to the inseparability of the old lady and the young woman in Leeper's famous ambiguous figure. (*ibid.* p.46)

We are reminded that we ought not to conceive of the dispositional as a polyadic relation between a property and its manifestation, on the one hand, and the qualitative as a monadic property on the other. Thinking in these terms will prove itself a stumbling block to understanding that the nature of the relationship between the dispositionality and qualitativity of a property is one of identity, for it is hard to see how an essentially polyadic

entity could be identical to a monadic one. One reason given for rejecting the relation view of dispositions is the independence of a dispositional property from its manifestation.

Martin and Heil offer the following statement of the surprising identity thesis:

A property just *is* a certain dispositionality that just *is* a certain qualitativity[...]

What we propose boils down to a surprising identity: the dispositional and the qualitative are identical with one another and with the unitary intrinsic property itself. The suggested identity is surprising only because we have grown used to distinguishing the dispositional and the qualitative. Once it is recognized that these are simply different ways of representing the selfsame property, the identity can be seen to resemble countless others.

For any intrinsic, irreducible property, then, what is dispositional and what is qualitative are one and the same property differently considered: considered as what the property exhibits of its nature, and considered as what the property is directive and selective for as its manifestations. These cannot be prized apart into the purely qualitative and the exclusively dispositional. The qualitative informs and determines the “forness” of the dispositional, and the “forness” of the dispositional informs and determines the qualitative. (*ibid.*, p.47)

Dispositionality and qualitativity have commonly been held to be distinct and separate: the claim that they are identical, if it is accepted, will then come as a surprise. The explanation provided for our taking the two to be distinct and separable is that they are “different ways of representing” the same thing, or the same thing “differently considered”. As has been mentioned earlier, how such an account can be maintained without descending into some sort of mind-dependence or ‘in-the-eye-of-the-beholder’ account of dispositionality and qualitativity requires further explanation, and this shall be the business of Chapters Five and Six of this thesis. We are also encouraged to think of the relationship between dispositionality and qualitativity as one of mutual determination. This seems puzzling given their claimed identity: it would seem strange to say “I mutually determine how I am with myself”; mutuality occurs between distinct existences, it is not an internal relation. Either Martin and Heil’s position is contradictory, or we must take this mutuality not to apply at the ontological level, but perhaps be an epistemological statement: what we *know* of the dispositionality of a property, once we have realised the surprising identity thesis, will inform and determine what we can know of the qualitativity of that property, and vice versa. Another possibility is that the mutuality claim be interpreted as a (perhaps slightly unfortunately worded) statement of the intimacy of the relationship between the dispositional and the qualitative: what one *is* the other *consists in* and vice versa *because they are the same thing!*

Martin and Heil go on to reject two ways of understanding this intimacy that had been previously endorsed in Martin (1996, p.133) and (1997, p.215):

This identity thesis must be distinguished from a view according to which dispositionality and qualitativity are taken to covary, even when the covariance is strictly necessary—as in the case of a triangle’s equilaterality and equiangularity [contra Martin 1997].

The necessity of a connection between nonspecific size and shape of an object is of little interest [contra Martin 1996]. In defending the identity of a property’s qualitativity and dispositionality, we mean to be speaking only of specific, maximally definite or determinate qualities and dispositions. Reality traffics in specifics. This is the locus of necessities (and nonnecessities), identities (and nonidentities). Imagine a triangle with a particular size and shape. If the quality of the triangle’s size or shape changes, so must its dispositionality—and vice versa. The covariance here is not that of one’s being caused by the other, nor is it merely accidental. (1999, p.47)

Whilst a triangle’s equilaterality and equiangularity are necessarily covariant—one cannot change without effecting some change in the other—such an example is not strong enough to provide a suitable analogy to the dispositionality/qualitativity case; a triangle’s equilaterality *is not* its equiangularity, but a property’s dispositionality *is* its qualitativity. Indeed both, ontologically speaking, *just are* the property, albeit under some partial consideration or abstracted representation. Given the explicit rejection of the size and shape analogy, the tension between the identity thesis and Martin’s prior claim that there could be properties with the same qualitativities as one another and yet different dispositionalities, is resolved, as statements (3.vii) and (3.viii) have now been explicitly rejected. The Limit View, as expressed here, is not simply that whatever is a property must have *some* dispositionality and *some* qualitativity or other; that this is what it means for something to be a property (compare this claim to the claim that all extended things must have *some* size and *some* shape or other, as this is what it means to be extended). Rather, according to the Limit View, all properties confer on their bearers both a *certain* qualitative nature and a *certain* readiness for *certain* manifestations. This is what it is for that property to be the *specific* property that it is. Once this is understood, there is no scope for interpreting the Limit View as allowing properties to vary in their dispositionality but not their qualitativity, or vice versa.

Martin and Heil (1999) emphasise the understanding of the Limit View as the thesis of surprising identity. The visual metaphors of Janus-faces and two-sided coins have fallen by the wayside; analogies with geometric relations have been rejected and whilst still

mentioned, the analogy with gestalt images receives far less focus in this paper than it has done previously. In the final section of this chapter, I examine Martin's final publication, his 2008 book *The Mind in Nature*.

3.6 Addendum: Gestalts Revisited

Martin (2008) is largely composed of re-edited versions of the papers discussed above (and several other papers), and regarding the Limit View there has been little substantive addition or change. As such, I shall not be giving a detailed analysis of the places where he does discuss the Limit View in this text, as it would mean simply repeating much of what has gone before in this chapter. However, there is one significant addition in the form of a much more detailed explanation of how cases of gestalt images are supposed to stand as analogies to properties as conceived under the Limit View. Consider the gestalt image below:

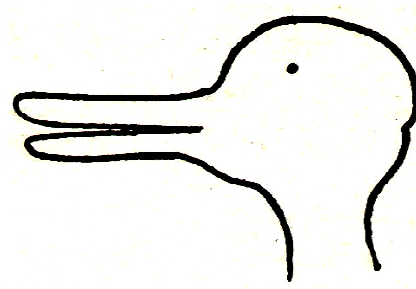


Fig 3.c

Martin (2008, p.68) makes the following claims about such an image:

1. Some can see only the duck;
2. Some can see only the rabbit;
3. Some can see nothing about the picture;
4. Some can alternatively see the duck or the rabbit in the picture;
5. Some can see both the duck and the rabbit at once, each filling the picture;
6. It is false to suppose that we see part of the picture as purely and solely rabbit and a different part as purely and solely duck, because the parts are not exclusive of one another—they fully overlap;

7. The duck drawing and the rabbit drawing are the selfsame unitary drawing. That explains, as nothing else can, the fact that they fully overlap.

These claims are to be considered parallels of the following claims about the nature of properties:

- 1'. Some can only (conceptually) 'see' the quality in its pure act with no potency—categoricalists such as Armstrong;
- 2'. Some can only (conceptually) 'see' the potency—dispositionalists such as Mellor;
- 3'. Some can 'see' nothing about properties—perhaps Quine's linguisticism;
- 4'. Some can alternatively 'see' the quality or dispositionality of the property;
- 5'. Some can 'see' both the quality and dispositionality at once, each filling the property—this would be Martin, Heil and others who accept the Limit View;
- 6'. It is false to suppose that we 'see' an aspect of the property as a purely and solely nondispositional quality and another aspect of the property as purely and solely nonqualitative dispositionality, because the aspects are not exclusive of one another—they fully overlap;
- 7'. The quality property and the dispositional property are the identical and unitary property. That explains, as nothing else can, that they 'fully overlap'.

Whether or not the parallels drawn above help the reader to understand the way in which gestalt imagery is similar to the conception of properties under the Limit View probably varies from reader to reader. I do not take Martin, in drawing these parallels, to be giving an argument in order to persuade people of the correctness of the Limit View (he gives such arguments in previous works, and elsewhere in Martin 2008). Rather, I take him to be trying to provide a model by which the reader might come to understand the surprising identity posited in the Limit View via an already familiar concept. The truth of statement 5—and so perhaps the truth of 5', which might be seen as crucial to the Limit View—is open to question:⁵⁶ can people really see both the duck and rabbit at once filling the picture? However, this does not seem to pose a serious problem for Martin. Such a failure would indicate a limitation of the perceptual/conceptual abilities of the observer/considerer, but should not be taken to have *metaphysical* consequences.

⁵⁶ Thanks to Ms Liat Netzer, in conversation, for this point.

Whether or not we can see both the duck and the rabbit at once filling the picture (or the dispositionality and qualitativity each filling the property) does not determine whether or not *in fact* the duck-picture and rabbit-picture both at once fill the ambiguous-line-drawing (or indeed, whether or not *in fact* the dispositionality and qualitativity each fill the selfsame unitary property).

Chapter Four: Answering Martin's Critics

This chapter will be concerned with criticisms levelled against the Limit View. As was discussed in Chapter Three of this thesis, the Limit View developed and changed over the course of Martin's career. Thus, objections raised at different points in Martin's career were raised to slightly different versions of the Limit View. This forces a methodological choice: responses can either be given using only the details and resources of the version of the Limit View against which the relevant criticism was levelled, or responses can be given which employ the resources of the interpretation of the Limit View which is argued for in this thesis. This chapter takes the latter approach. The responses given in this chapter should not, therefore, be seen as necessarily applying to the criticisms in the context within which they were originally raised. Rather, this chapter is exploring whether or not those criticisms stand against what I take to be the strongest version of the Limit View, as argued for in this thesis. It is a dialectical point worth mentioning that the relative success of these criticisms against other versions of the Limit View has contributed to the formulation of this interpretation of Martin's position.⁵⁷

This chapter looks first at the criticisms raised in the state-of-the-art text *Dispositions: A Debate* (Crane, ed., 1996) by both Armstrong and Place. Following this is an exploration of Molnar's criticisms of what he delineates as two distinct interpretations of the Limit View (2003). Finally, I briefly discuss the charge of obscurity levelled by Lowe (2006, p.134), which I take to be the most serious of all these criticisms.

4.1 Armstrong's Objections

Armstrong (in Crane, ed., 1996) levels several criticisms against Martin's Limit View. This section addresses each of these criticisms in turn. In the subsequent section, I examine a criticism raised by Place in the same volume. In the responses I give in this section I shall make reference to work Martin produced subsequent to the publication of *Dispositions: A Debate*; to the charge of anachronism I reply merely '*mea culpa*'. The purpose of the current exercise is not to assess the success of these criticisms in a given context (as is amply explored in Chapter Three of this thesis, the Limit View went through several

⁵⁷ For instance, of Armstrong's second criticism to any interpretation of the Limit View which *does* take the qualitative and the dispositional to be discrete sides or parts of a property.

changes as it developed over the course of Martin's career), but rather to explore whether or not they stand against the best theory that can be drawn from the body of Martin's work.

Armstrong's first criticism arises from Martin's postulation of the following possible scenario. Consider two elementary particles. These particles are disposed such that were they to come into contact with one another, they would produce a novel and idiosyncratic manifestation unlike any manifestation either particle has produced with any other particle with which it *has* come into contact. The particles are spatio-temporally distant from each other, however, and never meet in the whole history of the world (Martin in Crane ed., 1996 p.74). Martin argues that the possibility of such a case (and such a case seems *prima facie* plausible) indicates that these particles have irreducible, but never manifesting dispositions (*ibid.*). Armstrong's claim is that if we accept that these fundamental particles have irreducible and un-manifested (indeed never-manifesting) dispositions, then we must either accept the existence of relations which are lacking at least one of their terms, or else take irreducible dispositions to exist at some "second, inferior, level of being: merely potential being" (*ibid.*, p. 91).⁵⁸ Armstrong makes the further claim that we ought to be "extremely reluctant" (*ibid.*) to accept the notion of merely potential being. The first fork of the dilemma—that this argument might introduce relations missing at least one of their terms—is misguided: Martin's very claim that some dispositions exist un-manifested stands *as an argument against* providing an assay of dispositions as a relation between a property and a manifestation.⁵⁹ Furthermore, Martin explicitly rejects the notion that dispositions ought to be understood in this manner: "[...]dispositionality is *not* a relation between what is dispositional and what is its manifestation" (1997, p. 216).⁶⁰

If this objection is to have any force then, it must lie in the second claim that if we do not treat dispositions as these 'abnormal' relations, they must exist as merely potential

⁵⁸ This is of course an option—as Armstrong points out, Grossman postulates such 'abnormal' relations (1983, section 8.2). However, such a position is undoubtedly controversial, and if Martin's position forces us to accept it, this certainly seems to count against the Limit View, although it falls far short of a refutation.

⁵⁹ The non-relational nature of dispositions is discussed in sections 1.4 and 3.5 of this thesis. (See also, for instance, Molnar (2003, Chapter 4) for a lengthy discussion of the independence of dispositions from their manifestations.)

⁶⁰ See also section 2.1 of Martin (2008), titled 'Dispositions are not relations'!

being.⁶¹ Martin, in putting forth the elementary particle case, presents an argument against the reduction of all dispositions to categorical properties. In such a case, the claim is, whilst we can suppose that we can have complete access to and knowledge of the categorical nature of each particle, this tells us nothing of the nature of how such particles would interact, *ex hypothesi*, the novelty and idiosyncrasy of such an interaction is something we cannot know. Rather, all we can suppose of this latter is that it *would* occur, that is to say, that the postulated elementary particles have some irreducible dispositionality. As Martin puts it "[...]they have causal dispositions ready to *go*. The dispositional is as real and irreducible as the categorical" (in Crane, ed. 1996, p.74). Why then might one think that the elementary particle case suggested by Martin entails that dispositions exist at some secondary level of merely potential being, when he clearly states the opposite immediately following his state of the case? Armstrong is motivated by the fact that:

[...]at no point in the whole history of the world does this manifestation occur[...] [Y]et somehow the irreducible disposition involves the manifestation. It would appear that here we have a second, inferior, level of being: merely potential being. (*ibid.*, p.91).

It is clear that the manifestation which does not occur exists merely *in potentia*. However, this fact does not entail that the disposition that *would*, given appropriate conditions and interactions with other dispositions, lead to the manifestation's occurrence also exists merely *in potentia*. Quite to the contrary, if we are to suppose that there is something genuinely about the situation that makes it true that were the particles to meet they would interact in a novel manner, this something cannot be considered a mere-potential-something. Rather, this fact is underpinned by ways that each of the particles are, that is, by properties of the particles. These ought to be considered as real as any other truthmaker.

Furthermore, it seems that Armstrong, when motivating his objection from mere-potentiality fails to treat the claim that irreducible dispositionality is an element of reality alongside other claims Martin makes about the nature of property. What must be borne in mind are Martin's claims that "[t]he dispositional is as basic and irreducible as is the qualitative" (*ibid.*, pp. 132-133) and that "[t]o separate one from the other[...] is artifice and error" (*ibid.* p.133), claims later cashed out in terms of an identity, albeit a surprising one, between the dispositional and the categorical/qualitative (see sections 3.4-3.6 of this

⁶¹ It barely seems worth mentioning that for any philosopher who *does* accept a second level of potential being as unproblematic, this objection will be of no worry whatsoever.

thesis). If the claim that the dispositional and the categorical/qualitative are both identical to the property itself is taken seriously (as indeed it should be, it is a central tenet of the Limit View), then to accept Armstrong's accusation that dispositions are mere potential being implies, given the identity claim, that Martin is accused of taking not just dispositions but also qualities, indeed the entire category of property, as merely potential. Now if this is the case, it would be truly damaging. But this is clearly not Martin's position.⁶² Armstrong's criticism stems from treating Martin's account of the dispositional as if irreducible dispositions were *additional* properties to qualities existing somehow *alongside* them, with qualities providing the 'genuine being' and dispositions as 'mere corollaries'. This, however, is a misinterpretation of the Limit View, and when viewed aright, it should be clear that Martin should not be interpreted as making such a claim.⁶³

Armstrong's second criticism concerns the nature of the relation the categorical and dispositional 'sides' of a property bear to one another. In particular, Armstrong asks whether this relation is a necessary or contingent one. The problem is set out as follows: if the relation is contingent, then it is possible that different dispositions could be associated with the same qualities. Even more problematically, if the relation is contingent, it seems that it would be possible for qualities and dispositions to exist independently of one another, a claim which is in direct opposition to the Limit View:

It seems that it could not be contingent. For if it was, then it would be possible to have the categorical 'side' with different powers or even with no powers at all. And once this is allowed, what is the force of calling the powers a 'side' of just one entity? (*ibid.*, pp. 95-96)

However, if the relation is one of necessity, then Armstrong argues any effect issuing from the disposition as cause also issues, by transitivity, from the quality. If this is the case, then why not simply cut out the middleman and do away with the disposition? Armstrong's wording is telling:

⁶² Indeed, Martin's arguments against accepting pure dispositionalism are premised on the metaphysical unacceptability of an account of property built on merely potential being (see section 3.2 of this thesis).

⁶³ I recognise that I am not providing here an argument to *show* that this is the case. See Chapter Three for an exploration of what the Limit View is claiming and is committed to. Furthermore, Armstrong's criticism takes the form of an assertion rather than an argument, and so I take counter-assertion to be adequate to dispel any worry it might cause.

But if powers spring necessarily from the categorical side then, by transitivity, effects spring necessarily from the categorical nature. (*ibid.*, p.96)⁶⁴

Armstrong clearly assumes, and builds into his criticism, the notion that categoricity is somehow prior to dispositionality. Talking of powers *springing from* qualities implicitly assumes an asymmetry in the nature of the relationship between disposition and quality (if A springs from B, then it cannot be that B also springs from A). This prejudice in favour of the categorical clouds Armstrong's criticism. Martin's position is clearly stated as holding that for disposition and quality "there is no direction for one's being basic in a property" (in Crane ed., 1996 p.133). 'Springing forth' is entirely the wrong metaphor on which to understand the relation between disposition and quality: the relation, indeed, is one of identity, as discussed above. Once this is recognised, we can unpack Armstrong's criticism. His claim that if there is a necessary relation between power and quality (which of course there is according to the Limit View, identity being a necessary relation *par excellence*), then by transitivity effects spring from the categorical nature, can be upheld. However, the suggestion that this renders dispositionality a dispensable "middleman" (*ibid.*, p.96) clearly cannot. Given that there is no priority between power and quality, even if they are both related to the effect, neither is rendered obsolete by dint of being a mere intermediary between the other and the effect, and so neither can be "cut out" (*ibid.*, p.96). Furthermore, if we *were* to grant that Armstrong's argument succeeds and, in order to not beg the question against either 'side' (as Armstrong seems to in his prejudice in favour of the categorical) then it seems the argument is of equal force against both powers and qualities, for we might say:

'But if the *quality* springs necessarily from the dispositional side then, by transitivity, intrinsic nature springs necessarily from the dispositional. And at that point it would be tempting to cut out the middleman (irreducible categoricity) and simply postulate dispositional properties'

If we grant the objection, it seems to cut both ways, and thus is no more damaging to dispositions than it is to qualities. Neither the dispositional *nor* the categorical ought to be 'cut out', rather, it should be clear that the Limit View holds that each is as real, actual and indispensable as the other.

Another objection Armstrong raises, albeit with the caveat that "he [Armstrong] recognises[...] that here he is opposing Martin's view rather than arguing against him" (in

⁶⁴ Molnar echoes this criticism (2003, p.151).

Crane, ed. 1996 p. 95), is that it is a consequence of Martin's position that there will be either a 'necessary connection' (if dispositions are deterministic) or a 'logical probability' (if dispositions are not deterministic) connecting cause and effect.⁶⁵ Cause and effect are distinct existences, and so Armstrong claims we should "[...]reject such a view on the ground that there can be no logical links between distinct existences[...]" (*ibid.*). Martin, (and I in agreement with him) simply rejects the claim that there cannot be such links between distinct existences, consider:

[...]the way shape and size are of *extension*. In each case, one cannot exist without the other, though one can *vary* without the other. *Contra* Hume and Armstrong, they are distinct but not separable.

Contra Armstrong's Humeanism, there are even cases of distinctness that lack separability that also *must* co-vary, e.g. the old example of equiangular and equilateral.

[...]An example of necessary causal relations ('linkings') between distinct properties is *how* a square peg does not fit into a round hole the *way* a round peg does. (in Crane, ed. 1996, pp. 133-134)

I take the above quotation to be adequate to establish that, *contra* Armstrong, there *can* at least sometimes be logical links between distinct existences, and so it is no criticism of the Limit View *prima facie* that it postulates such links.⁶⁶ There is a second question which arises from Armstrong's objection: even if we do grant that there can be logical connections between distinct existences, it can still be asked whether cause and effect are the sort of distinct existences which it is appropriate to consider so connected.⁶⁷ A full answer to and exploration of this question would require far more space than can be spared here.⁶⁸ I shall restrict my response to the observation that it seems far less

⁶⁵ These terms are Armstrong's, and I shall adopt them for this discussion. If a 'necessary connection' obtains between cause and effect, then for every possible world in which the cause occurs, the effect follows. If a 'logical probability' holds between cause and effect, then there is some objective probability that the effect will follow given the cause, and that probability will be the same in every possible world in which the cause occurs.

⁶⁶ It should also, given the contents of Chapters Five and Six of this thesis, be clear that I do not find such links problematic. These chapters are concerned with the exploration of how things can be such that they are inseparable and yet distinct!

⁶⁷ This question is not one that Armstrong explicitly raises, as he does not consider such links acceptable for *any* class of entity.

⁶⁸ Martin's theory of causation (or more properly, his theory of reciprocal disposition partners for mutual manifestation, which he takes to provide an explanation for causation in terms prior to those of cause and effect, see Martin (2008, Chapter 5)) goes some way to providing such an answer, one that I shall not rehearse here. Mumford and Anjum (2011, Chapter 3) provide an argument against

metaphysically mysterious to suppose that in exactly similar causal situations A and B exactly similar effects will follow (in a deterministic case) or there will be an exactly similar probability of exactly similar effects following (in a non-deterministic, probabilistic case) in each case, than it would to suppose the converse; that is, that there would be a difference in effects in A and B. Without a difference maker present in either situation to explain why one effect follows in A and another in B, (and *ex hypothesi* there cannot be any difference maker) I find the supposition that nevertheless there would be a difference in effects obscure. On this basis, it seems unproblematic to consider cause and effect viable candidates, at the least, for distinct existences with some sort of necessary connection.⁶⁹

None of the objections to the Limit View raised by Armstrong (in Crane, 1996), given a proper understanding of that thesis, ought to give rise to serious worry. However, Armstrong has more recently raised another objection, a charge of obscurity. This shall be discussed in section 4.4, below. In the next section of this chapter I shall turn to another objection raised Place.

4.2 Place's Objections

Whilst Place recognises that "the differences between Place's position and Martin's are less substantial than those between Martin's position and Armstrong's or between Place's position and Armstrong's" (in Crane, ed. 1996 p.105), he takes issue with Martin on the central claim of the Limit View: that no property can be *purely* categorical or *purely* dispositional. Contra Martin, Place presents the following argument for the existence of purely dispositional properties. Consider sharpness:

[A]lthough the fineness of an edge or point is a necessary condition for a thing's being apt to cut or pierce other things, in order to have that dispositional property, the object must also be harder and more rigid than the object to be cut or pierced. This shows us three things:

- 1 that the concept of 'sharpness' is an amalgam of two distinct concepts,
 - the structural concept 'having a hard, rigid and fine edge or point', and

taking causes to necessitate their effects which appears to be consistent with the model of causation Martin adopts. They argue that causes cannot be taken to necessitate their effects, because it always remains a possibility that another disposition partner could be added to the situation which would interfere with the production of the effect.

⁶⁹ I echo Armstrong's caveat that here perhaps I am merely opposing the view to the contrary, rather than providing a robust argument against it.

- the purely dispositional concept 'being apt to cut or pierce'
- 2 that the relation between the features of an object[...] is causal[...] they are distinct existences
- 3 [...]the fineness of the edge or point is categorical/qualitative; the hardness and rigidity are both dispositional. (*ibid.*, pp. 114-115)

We are invited to reflect on the fact that “to say of an edge or point that it is fine and to say of it that it is apt for the purpose of cutting or piercing is not to say the same thing” (*ibid.*). Citing this example is supposed to show that there are at least some purely categorical properties (e.g. fineness of the edge) and some purely dispositional properties (e.g. hardness, rigidity and aptness to cut or pierce). If some concepts can be analysed in the manner in which Place analyses sharpness above, as complex concepts composed of purely categorical and purely dispositional concepts, and the further move (for which Place provides no argument) that these concepts correspond to genuine properties can be supported, then it seems that a counter-example to the central claim of the Limit View (that genuine properties are neither purely categorical nor purely dispositional) has been provided.

In his 'Reply to Place' (in Crane, ed., 1996, pp. 140-146) Martin does not respond to this criticism, or even acknowledge it. However, the sort of response that should be given by a proponent of the Limit View is clear. Contra Place's analysis of the concept of sharpness into the elements of 'fineness, hardness and rigidity' and 'aptness to cut or pierce', I would argue that to say of something that it is sharp *just is* to say that it is 'apt to cut or pierce'. It is hard to see what else could be meant by 'sharp' (in the given context). What makes something sharp/apt-to-cut-or-pierce is it's having a fine, hard and rigid edge or point.⁷⁰ So, to maintain his claim to having provided a counter-example to the Limit View, Place would need to show (rather than just state), first, that fineness, hardness and rigidity pick out genuine properties, and secondly, that the first is purely categorical and the second two purely dispositional. Remember that Martin maintains a sparse view of properties (as discussed in section 1.4) according to which: (i) properties do not match up one to one with meaningful predicates, and (ii) the properties of fundamental particles are basic, the complex properties of larger entities are composed of and so analysable in terms

⁷⁰ It should be noted that *even if* one accepts Place's analysis of the concept, Martin does not deny that we have purely dispositional and purely categorical *concepts* (indeed, he holds that we do, and it is for this very reason that we have taken it to be the case that the world contains purely dispositional and purely categorical *properties*). However, we should not simply read our *ontology* off of our concepts.

of these.⁷¹ As Martin puts it "[t]his is to think that if the properties and relations of entities that we are considering are complex then the entities must have simpler constituents and their properties and relations must be simpler" (1997, p.199). The concepts Place cites are clearly not properties of fundamental particles, and so are had, according to a Martin-style analysis of property, in virtue of the object concerned being composed of certain fundamentals which have certain properties.⁷² If fineness, hardness and rigidity are to be taken as counter-examples to the Limit View, it must be established that they are had, in the first case, in virtue of the object of which they are predicated having fundamental constituents which have some purely categorical properties which make it true that that object is fine; and in the second two cases, that they are had in virtue of the object having fundamental constituents which have some purely dispositional properties which make it true that the object is hard and rigid. If the terms 'fine', 'hard' and 'rigid' apply to an object in virtue of its being composed of fundamental constituents with properties that conform to the Limit View, then fineness, rigidity and hardness are not counter-examples to the Limit View, *even if* what these terms *pick out* are purely categorical or purely dispositional *contributions* made to the object by the properties which are the truthmakers for the ascriptions of fineness, rigidity and hardness to the object. If this is the case (which it is not even *prima facie* clear that it is) all that is established is that certain terms denote partial or abstracted *representations* or *concepts*, which, as mentioned, are the source of our (as Martin contends) *mistakenly* taking there to be purely categorical/dispositional *properties*. Place falls far short of providing arguments to establish what would be necessary to provide a counter-example to the Limit View, his criticism amounts to no more than a mere assertion of the contrary: that there are purely categorical/dispositional properties. Given that Martin provides *a priori* arguments against each of these possibilities, which are not addressed by Place's criticism, a supporter of the Limit View ought not to be worried by the case which Place raises.

4.3 Molnar's Objections

In *Powers* (2003) Molnar (recognising the same development in the Limit View discussed in Chapter Three of this thesis) identifies two separate positions that can potentially be

⁷¹ Martin lays out his compositional model in (1997, pp. 198-201).

⁷² And any successful attack on the Limit View should be at least amenable to this sort of analysis, otherwise it seems the critic is merely talking at cross purposes to Martin, or else not really attacking the Limit View per se, but rather disagreeing with Martin about basic ontological commitments.

attributed to Martin: one which he calls 'Dual-sided theory' (the theory, which I have argued is a misconception of the Limit View, that all properties are somehow composed of an irreducibly qualitative side/aspect/part and an irreducibly dispositional side/aspect/part) and the other he terms 'Neutral monism' (an interpretation of the Limit View which includes the thesis of surprising identity). In this section I shall discuss one objection which Molnar levels at both of these positions, what he terms 'the missing base objection,' (2003, pp. 131-136, for example—Molnar also levels this objection at reductive categoricism) and one he levels only at 'neutral monism'.^{73 74}

The missing base objection targets Martin's claim that the world contains irreducible qualitativity/categoricity. The challenge that Molnar makes stands as follows:

What and where are these qualitative sides of the essential properties of fundamental subatomic particles (or field densities)?[...] they have to exist, they have to be part of the basic ontological inventory of the world. (*ibid.*, p.151)

yet, with regard to fundamental properties Molnar claims:

[...]we have, on the very best experimental and theoretical evidence, no reason for supposing that they [such properties] have a non-dispositional or qualitative nature[...] The postulation of such a nature does not seem to be required for anything. Why believe in it? (*ibid.*, p.157)

This objection contains two distinct claims, which must be treated individually, and which attack one of the central tenets of the Limit View—that irreducible qualitativity is a feature of every genuine property—in different ways.

The first claim is one from current evidence from the empirical sciences: that we are currently unable to identify qualitative properties at the level of fundamental physics. On the strength of this lack of evidence for qualitative properties at what is considered the most basic level by current particle physics, Molnar argues we should not include qualitativity in our fundamental ontology. A potential response which immediately springs to mind would be to question whether or not what current particle physics takes to be the

⁷³ The name 'the missing base objection', is, when applied to the Limit View, something of a misnomer, as it should be clear that Martin does not argue for irreducible qualitativity as a reduction base.

⁷⁴ Molnar also echoes Armstrong's objection to the Limit View concerning the relationship between the 'sides' of a property in his discussion of dual-sided theory (2003, pp. 150-151), which is examined earlier in this chapter. However, he does not advance on Armstrong's discussion and so I take the response to Armstrong's criticism given above to equally stand as a response to Molnar's reiteration of that criticism; to rehearse it again here would be idle repetition.

most basic level actually is the fundamental physical level, or whether, as is plausible, future physics will uncover an even more basic level, one at which qualitative properties will be exhibited. Molnar counters this line of response with the claim that given recent experiments we can also be fairly confident that what physicists currently take to be the most basic level of physical entities will not, in future experiments, turn out to in fact be composed of some more basic entities (*ibid.*, p.133).⁷⁵ If we accept Molnar's claims, then we must concede that the most basic physical entities do not, according to current science, exhibit qualitative properties. This raises the question of what, then, justifies positing such properties in our fundamental ontology. He takes these claims to provide strong support for the conclusion that there is no qualitativity/categoricity at the fundamental ontological level, and therefore no genuine properties of fundamental particles are properly described as qualitative/categorical.⁷⁶ The Limit View is mistaken in making the claim that every genuine property is qualitative-cum-dispositional, as there is insufficient empirical evidence for the claim to qualitativity, and further evidence which suggests that this lack of evidence will not be rectified by advances in the physical sciences.

There are two avenues of response open to the defendant of the Limit View to this objection. The first is the general point that whilst the findings of current empirical science are informative and suggestive for the metaphysical and ontological accounts we advance, they are not metaphysically *compelling*. This is not to say that empirical evidence should be treated with scepticism or disdain. As Martin puts it, when discussing his compositionism:⁷⁷

None of this [discussion of the relation of findings in physics] should suggest that the philosopher should react with dumb faith to the latest and changing revelations from theoretical physics or by an arrogant disbelief or a "That's what they say *now*" cynicism. It should incline philosophers to a greater alertness to alternative ways the world may be. (1997, p.201)

Drawing on such and such findings in recent experiments, whilst lending support to a certain position or line of argument within metaphysics, will never be sufficient *alone* to establish that position:

⁷⁵ My knowledge of fundamental physics is not adequate to comment on this claim, however, my response to this objection will not rely on its denial. Molnar cites Kane (1995) in support of this claim.

⁷⁶ With the exception of spatio-temporal properties (Molnar, 2003, p.172).

⁷⁷ See Martin, 1997, Section 3.

Ontology is the setting out of an even more abstract model of how the world is than that of theoretical physics, with *place-holders* for scientific results and some *excluders* for tempting confusions. Ontology and theoretical science can help one another along with, we hope, minimal harm. (*ibid.*)

Whilst Molnar makes the claim that "we have, on the very best experimental and theoretical evidence, no reason for supposing that [properties] have a non-dispositional or qualitative nature" (2003, p.157), it must be noted that 'dispositional' and 'qualitative' *are not* ascriptions made by the findings of theoretical physics—in stating the Limit View Martin does not reject any claim made by physicists—but rather are part of the special vocabulary of ontologists. It is a matter for debate within ontology how (and indeed whether or not) these terms match up to evidence from physics. It is a methodological mistake to think that data from the natural sciences *alone* stands as proof for or against either the existence of qualities or the existence of dispositions. Property types (in the context of debates concerning the ontology of properties) simply are not specified in the laws of physics. The second avenue of response is a related one: the main arguments Martin provides in support of his claim that properties cannot be *purely* dispositional are *a priori* (see Chapter Three of this thesis). If we do not take these arguments to sufficiently support Martin's position, then the Limit View is in trouble regardless of this objection, for it is under-motivated. However, if Martin's arguments are taken to provide good reasons to accept the claim that every property involves some irreducible qualitativity, then, as well established *a priori* claims they will not be much threatened by the sorts of observations of current empirical science that Molnar cites.⁷⁸

The second line of criticism exhibited in Molnar's discussion of the 'missing base objection' is one of redundancy:

The postulation of such a nature does not seem to be required for anything. Why believe in it? (*ibid.*, p. 157)

If, as Molnar claims, holding that all properties essentially involve some irreducible qualitativity/categoricity is explanatorily impotent and thus that the postulating of this qualitativity/categoricity is surplus to the requirements of any assay of the fundamental ontology of property, then one of the central claims of the Limit View—that all properties are both qualitative *and* dispositional—seems mistaken. Rather, it should be conceded that all properties are nothing but pure dispositions. In assessing this criticism we must be clear

⁷⁸ I take it as a general methodological principle that conclusions reached *a priori* are not threatened by a *lack of a posteriori* evidence in their favour (direct *a posteriori* evidence against them would be another matter).

as to what a strong dispositionalist thesis entails: the claim that *all* properties are *nothing* over and above a power/capacity/disposition for the production of some further power/capacity/disposition, which in turn is nothing over and above the power/capacity/disposition for the production of some further... and so on. If this picture appears palatable, then the second claim of Molnar's objection will hold some force against the Limit View. However, I am with Martin, and would imagine many other metaphysicians would be also, in finding such an account of property "entirely too promissory" (1997, p. 215). Indeed, comments made by Molnar (2003, Chapter 5) suggest that he wishes to avoid such an analysis of dispositionality.⁷⁹ If this is the case, then his disagreement with Martin on this point may be more a matter of terminological disagreement (with regard to what it means for something to be *purely* dispositional) and dissent with regard to extent—how far the role of some non-dispositional nature to property extends—rather than as fundamental a disagreement about the nature of property as it appears to be. Furthermore, Heil (2010) has recently argued that qualitativity may be essential to providing identity and individuation conditions for dispositions. If he is correct, then qualities are, *pace* Molnar, not explanatorily redundant.

Molnar's second criticism of the Limit View, levelled against the interpretation he terms 'neutral monism', is a charge of anti-realism. Molnar claims that the terms 'quality' and 'disposition' are *prima facie* inconsistent: he defines power (disposition) as "a property that is essentially directed to a specific manifestation" (2003, p.155) and quality as "a property that is not essentially directed to a specific manifestation" (*ibid.*). Thus set up as direct antonyms, there is a clear conflict in considering the two terms to apply to one and the same thing (such an application would be a claim of the form $P(x) \& \neg P(x)$, and so a straight contradiction). Thus, any account of property which wishes to apply them both (as the Limit View does) to a single entity cannot accept the definitions of these terms proposed by Molnar. How might these terms be interpreted then? Molnar looks to Martin's

⁷⁹ Molnar writes, for instance "[T]o say something has a power is not to say merely that some manifestation-event is possible. Powers are not merely the potentiality of some behaviour." (2003, p. 99) The proponent of the Limit View should agree wholeheartedly with this claim. They will say that what makes it the case that a power/disposition is not "merely the potentiality of some behaviour" (*ibid.*) is just that it is not *purely* dispositional/powerful. If it were, then indeed it would be this mere potentiality. Molnar provides convincing arguments against his 'powers' being mere potentialities (see *ibid.*, pp. 100-101), but does not offer an assay of what it is, ontologically speaking, about them which makes them more-than-mere-potentiality. The proponent of the Limit View would explain this in terms of no property being *purely* powerful/dispositional, rather all properties being dispositional-cum-qualitative and qualitative-cum-dispositional.

gestalt-perception analogy for such an interpretation (see sections 3.4-3.6 of this thesis for a detailed discussion and references to Martin's own discussions of this analogy). He claims that whilst this analogy provides such an interpretation which deals with the inconsistency, “the explanation comes at a cost, and the cost may be unacceptably high” (*ibid.*). Molnar takes Martin's gestalt analogy to have the consequence that “whether an object has powers and qualities depends in part on the considerings that happen (on what we see things as)” (*ibid.*, pp. 155-156). Molnar claims that this leads to an unacceptably anti-realist conception of both dispositions and qualities, according to which whether a property counts as these is a mind-dependent matter.⁸⁰

There are several lines of response the defendant of the Limit View can give to the charge of anti-realism. Elsewhere in this thesis I discuss two of them at length: to challenge the claim that the gestalt analogy implies mind-dependency, and to challenge the claim that all distinctions which involve some conceptuality lead to anti-realism (see section 3.4 and the whole of Chapters Five and Six—indeed, if what I argue for in these chapters is convincing, this objection is immediately countered and need not concern the proponent of the Limit View). I shall not rehearse these responses here, and shall instead focus on two other ways Molnar's objection can be countered.

Molnar motivates the objection by establishing a *prima facie* inconsistency (indeed, given his definitions, there is actually a contradiction) in holding that for some property *x*, *x* is a disposition and *x* is a quality.⁸¹ This inconsistency/contradiction, and thus the motivation for the objection, rests on the plausibility of the characterisations he gives for power/disposition and categorical property/quality, which were examined in section 2.4 of this thesis:

(2.v) disposition: “a property that is essentially directed to a specific manifestation” (2003, p. 155);

(2.vi) categorical property/quality: “a property that is not essentially directed to a specific manifestation” (*ibid.*).

Whilst the characterisation of power or disposition seems uncontroversial, it is not as obvious that quality should be defined in terms of non-directedness-to-a-specific-manifestation. It might be argued that to define disposition and quality thus, as exhaustive

⁸⁰ And indeed, if Martin's position really does mean anti-realism with regard to both dispositionality and quality, any right-thinking metaphysician would also find it unacceptable!

⁸¹ Which is the central claim in the Limit View!

antonyms (Molnar essentially defines quality such that it means all-and-any-properties-that-*are-not*-dispositions) is to beg the question against the Limit View. What is key when examining questions regarding the Limit View is the issue of *purity*. Following Molnar's lead, the definition of a pure disposition would be:

(2.viii) pure disposition: a property that is essentially directed to a specific manifestation, and is nothing over-and-above this directedness.

A pure quality would arguably be:

(2.ix) pure quality: a property that is essentially not directed to a specific manifestation.

(2.v) requires that any disposition be, of its essence, directed towards some specific manifestation; (2.viii) requires that a pure disposition is nothing more than the fact of this directness. The difference between (2.vi) and (2.ix) is subtle; the former states that a quality may lack directedness, it is not of the essence of quality that it be directed but it is not specified that it cannot be; the latter stipulates that of its essence a pure quality must not be directed towards a specific manifestation. It should be clear that a proponent of the Limit View will hold that all properties fit (2.v). It should also be clear that she will deny that there are any properties fitting (2.viii) and (2.ix). Thus, she holds that all properties are dispositional but not purely disposition, and also not purely qualitative. This leads to the conclusion that whatever it is about property that makes it true that it is not purely dispositional must be that it admits of some measure of qualitativity (although, of course, not pure qualitativity!). However, the issue of inconsistency remains: whilst we have seen that an essentially directed property (Molnar's disposition) can be more than this directedness, and that a property that is not essentially directed (Molnar's quality as defined in (2.vi)) *may* still be non-essentially directed, it would still be contradictory to say of any property that it was both essentially and not essentially directed towards a specific manifestation (that it was both disposition and quality). This returns us to the earlier observation that defining quality merely negatively in terms of not-being-essentially-directed might seem strange. In section 2.4 I proposed a potential alternative characterisation of quality:

(2.vii) quality: a property that is something other than essential directedness to a specific manifestation.

As mentioned previously, (2.vii) is unlikely to be exhaustive; there might be more to say about the nature of qualitativity than its being-other-than-pure-dispositionality.⁸² (2.vii) has an advantage over (2.vi) in that it allows for something substantive to be said about quality where the antonymous (2.vi) simply consigns anything-not-a-disposition to the category of quality. Furthermore, there is no *prima facie* inconsistency between (2.v) and (2.vii), and thus this definition does not beg the question against the Limit View. Rather, it remains an open question whether or not it is appropriate to describe properties as being both dispositions and qualities, or whether each property is either one or the other. Without the *prima facie* inconsistency between disposition and quality, Molnar's objection lacks motivation and poses little threat to the Limit View.

A second response to this criticism takes a slightly different approach. In the way his objection is set up, Molnar takes 'power' and 'quality' to be type-terms ranging over properties. Some properties are of the type 'power', some of the type 'quality' (and, maintaining this line of thought, Martin would take all properties to be of both types). Molnar tries to establish that, given Martin's analogy to gestalt-perception, if this is the case, then properties are only of both these types mind-dependently: a property is only of the type 'disposition' mind-dependently and that same property is only of the type 'quality' mind-dependently. Therefore, without the operations of human consciousnesses, no properties are of either type. This Molnar takes to be an indication of an unacceptable anti-realism. The proponent of the Limit View should in fact agree that there are only properties of the types '*pure* quality' and '*pure* disposition' mind-dependently, but should not concede that this involves any sort of anti-realism with regard to property, or indeed with regard to dispositionality or qualitativity.⁸³ It is a mistake, under the Limit View, to view 'disposition' and 'quality' as type-terms, where these type-terms are considered to pick out distinct kinds of entity at the level of fundamental ontology; the only type-terms that properly apply at that level are those of 'substance' and 'property'.

Given this, the proponent of the Limit View is an anti-realist about 'dispositions' and 'qualities', qua distinct fundamental ontological types, that is to say, she does not accept that at the fundamental level there are some entities that are dispositional-and-not-qualitative-properties and some other entities that are qualitative-and-not-dispositional-

⁸² See section 2.4, 11.3 and Chapter Twelve of this thesis for some (relatively) speculative discussion about the nature of qualities.

⁸³ Martin describes taking there to be properties of these 'pure' types as "philosophical fantasy" (1997, p.215).

properties. But is this anti-realism unacceptable? I hold that it is not, for the proponent of the Limit View is realist about (at least) three things: the fundamental ontological category of 'property' and about both dispositionality and qualitativity at the fundamental level. Rather than this realism being cashed out in terms of two distinct property types 'dispositions' and 'qualities', the Limit View holds there to be only one type of property: property itself. But each and every property contributes *both* to the qualitative nature and to the dispositional nature of the substance that instantiates it. These contributions are not mind-dependent in any way, they are features of the way things are external to any operations of the human mind. Mind-dependence only enters the scene when we wish to (incorrectly, according to the Limit View) *consider*, through abstraction, properties as either purely dispositional or purely qualitative; and what is mind-dependent here is not the dispositionality or qualitativity, but rather the *purity*. The dispositional and the qualitative are real enough, the proponent of the Limit View is not making the claim that nothing is dispositional or qualitative.⁸⁴ Rather, they claim that the ontological basis for the dispositionality and qualitativity exhibited by objects, and that which provides the truthmakers for statements concerning this, are entities from a single fundamental ontological category: properties! What would be worrying is if it were a consequence of the Limit View that the dispositional and qualitative features of objects turned out to be mind-dependent, but Molnar provides no argument to suggest this is the case. There is plenty of realism in the Limit View—Molnar's charge does not stand.

4.4 Obscurity

Armstrong has more recently expressed his worries concerning the Limit View as below:

I confess that I find this totally incredible. If anything is a category mistake, it is a category mistake to identify a quality—a categorical property—and a power, essentially something that points to a certain effect. They are just different, that's all. An identity here seems like identifying a raven with a writing desk. (2005, p.315)

Lowe (2006) levels a similar charge of obscurity against Martin:

⁸⁴ Indeed quite the opposite is asserted, for the proponent of the Limit View *all* properties (rather than none) are mind-independently both dispositional and qualitative. The proponent of the Limit View seems, contra Molnar's accusation, to have an abundance of realism!

[...]he is compelled to say that every particular property or trope is at once dispositional and categorical (or qualitative) in nature. But, as I say, I do not really understand what this could *mean*. (p.134)

This objection is clearly very general, but if it stands, also very serious (indeed, I take it to be the most serious objection examined in this chapter). If the central thesis of the Limit View—that contrary to the paradigm positions in the debate, 'disposition' and 'quality' do not pick out different types of property, but rather all properties are *both* dispositional *and* qualitative, and neither one can be reduced to the other—is metaphysically obscure, then the tenability of the Limit View is called into question. Naturally, such a grave and general charge requires an extensive and equally general response, one much larger than can be provided in a short section of one chapter. Indeed, it is in part the purpose of the last two chapters, this chapter and the chapter that follows to provide a response to the charge of obscurity levelled by Armstrong and Lowe. I hope that, in clarifying the background of the Limit View, and examining the nature of the surprising identity thesis, these chapters jointly provide an account of the Limit View that is not metaphysically obscure, and therefore take it to be the case that the obscurity objection does not stand.

I have argued that none of the criticisms raised against Martin's Limit View in the literature are sufficient to require that the position be abandoned. However, what the exploration of the criticisms has helped to show is which aspects of the Limit View in some of its incarnations are untenable. In the next two chapters I aim to integrate the findings this chapter and the last two with considerations concerning the metaphysics of identity and distinctness, and present a final interpretation of Martin's Limit View which I hold to be most tenable, defensible, clear and theoretically rich.

Chapter Five: Distinctness

In the previous two chapters a tension was identified between two key claims of the Limit View; namely, that dispositional and qualitative properties are in reality both identical to the same unitary property, and that dispositional and qualitative properties are not artefacts of the mind, that they are not merely 'in-the-eye-of-the-beholder'. The worry is motivated thus: for any particular property, p_1 , there is some disposition, d_1 , for which it is true that $d_1=p_1$, and also some quality, q_1 , for which it is also true that $q_1=p_1$; therefore, by transitivity of identity, $d_1=q_1$. This is the 'surprising identity' discussed by Martin (see for instance 1997, p.216). What is traditionally taken in the disposition debate to be two classes of entities—'dispositions' and 'qualities'—are revealed as a single class—'properties'—and where a distinction was previously maintained, an identity now inheres. If, following this shift, we still maintain distinct concepts of dispositional and qualitative properties, *prima facie* it seems this must be merely an act of the intellect; a mental separation of what is, in reality, unitary and singular (property) into two distinct conceptual classes which do not correlate with any distinction in reality. This seems to render the distinction between dispositional and qualitative properties—and, therefore, the being-qua-disposition/quality of dispositions and qualities—merely 'in-the-eye-of-the-beholder', a position Martin explicitly denies. (See for instance Martin 1996, p.174 or 1997, p.202.) This denial is a tenet of the Limit View that I consider worth maintaining. If Martin's position does turn out to be anti-realist about both dispositional and qualitative properties, it becomes difficult to see in what manner it is realist about properties at all.⁸⁵

This chapter will explore the ontology of sameness and distinctness. It will begin with a brief gloss of the notions of identity and distinctness. The second section will examine the employment of the scholastic notions of 'distinctions of reason' or 'formal distinctions' within recent work on the tropes/universals debate. Both Gibb (forthcoming) and Campbell (1990) make recourse to the 'formal distinction' in response to the 'problem of trope simplicity', albeit in different ways and to different extents (Gibb provides a much more thorough and detailed argument than Campbell). Mertz, in presenting his account of 'relation instances' provides a detailed analysis making use of these Scholastic distinctions (in particular Mertz, 2004), so in the third section I turn to an examination of his treatment

⁸⁵ Although one could accept the identity thesis and reject the claim that the distinction that obtains between dispositions and qualities is more than 'in-the-eye-of-the-beholder'. This seems to involve conceding that dispositional and qualitative properties are mere artefacts of the human intellect.

of the subject matter, one I ultimately find unsatisfactory. The fourth section of this chapter returns to the source material, the scholastic philosophy of John Duns Scotus and Francisco Suárez, with particular attention paid to Duns Scotus' version of the 'formal distinction' (2012) and Suárez's *distinctio rationis ratiocinatae* or 'distinction of the reasoned reason' and 'modal distinction' or 'distinction from the nature of the case' (2007). The final section explores each of the accounts of distinctness discussed previously in the chapter with regards to how they might shed light on the abovementioned tension in Martin's account. Whilst I conclude that most of the accounts are either inappropriate for the case at hand, or else beset with problems that make them unattractive propositions for applying to Martin's case, both Gibb's account and Suárez's distinction of reason represent potential ways to understand the puzzle of holding that the distinction between dispositions and qualities is more than a mere act of mental separation, and yet also that dispositions and qualities are surprisingly identical. The issues discussed in this chapter, along with the archaeological exploration of the Limit View given in Chapter Three and my responses to Martin's critics (see Chapter Four) form the foundations of the critical exposition of the Limit View to be given in Chapter Six of this thesis.

5.1 Identity and Distinctness

There is something to Lewis' (semi)glib comment that "[i]dentity is utterly simple and unproblematic. Everything is identical to itself; nothing is ever identical to anything except itself. There is never any problem about what makes something identical to itself; nothing can ever fail to be," (1986, p.192). At the fundamental level, this holds true; there are no entities that are not identical to themselves (identity is carried in the concept of 'themselfness', as it were); nor are there entities which are identical to entities which are not themselves (conversely, 'themselfness' is also carried in the concept of identity). Yet it is the nigh-on tautologous nature of such a statement that makes it scarcely illuminating or informative with regards to its subject matter.⁸⁶ When we think we have problems or puzzles arising from identity, this is not down to us taking it to be the case that there are fundamentally, ontologically distinct entities that yet still we wish to take to be fundamentally, ontologically identical, or indeed, vice versa; fundamentally, ontologically identical entities that in spite of this we wish to take to be fundamentally, ontologically

⁸⁶ The statement that "everything is identical to itself" seems tantamount to 'everything is identical to that with which it is identical'.

distinct. Rather, I contend, we work from plausible putative cases of identity or distinctness with the intention of discovering *whether or not* these are reflected at the fundamental, ontological level.⁸⁷ That is, investigations into the nature of identity and distinctness in general and into particular cases involving these notions are, in large part, directed toward determining whether the things we pre-critically take to be one or many *really are* one or many, respectively.

A reasonable starting point for any discussion of identity is the principle of ‘the identity of indiscernibles’ and its converse, the ‘dissimilarity of the diverse’ (as discussed in McTaggart, 1921). These principles claim that no two distinct objects can share all their properties, and thus that two putatively distinct entities, if it turns out they do share all their properties, are in fact one and the same entity. Two concepts putatively applied to a single entity, if they entail two non-shared sets of properties, must in fact apply to two entities. However, it should be clear that, in the case of the current discussion, this principle is not pertinent; what we are discussing is *properties* themselves, not bearers of properties.^{88 89} Likewise, discussion of identity in terms of composition is relevant only to complex wholes composed of proper parts, whereas the subject of the present discussion—properties—pertains to ontological fundamentals.^{90 91} If it is not appropriate to

⁸⁷ These plausible putative cases will be, I contend, most commonly motivated by our pre-critically taking there to be either a distinctness or identity at the level of the concepts we have regarding the entities concerned (for instance, the Hesperus/Phosphorus case), although I have no firm commitment to, nor does anything in this discussion hinge on, this being the case.

⁸⁸ It might be commented here that properties can themselves be the bearers of properties—second order properties—and so perhaps the principle can be applied in light of this. Whilst I do not wish to take a position on the matter of whether there are genuinely any second order properties, it must be made clear that if we do include these in our ontology, they cannot provide the identity conditions for our first order properties on pain of regress (for if a property’s identity is fixed by the properties it bears, then those properties’ identities will be fixed by the properties *they* bear, and so on...).

⁸⁹ It should also be noted that these principles are not universally accepted. (See for instance Black, (1952), where he discusses the possibility of a universe containing only two qualitatively identical spheres at some distance from each other, or Lowe (2002), p.62.)

⁹⁰ See, for example, Part 1 of Lowe (2002), or Van Inwagen (1980); there is a wealth of literature on this topic.

⁹¹ At this point one must make reference to Armstrong’s account of complex properties (1997, pp. 31-33), where he argues that it does remain a live possibility that all properties are complex all the way down; there are no simple, non-composed properties; and that even if it does turn out that all complex properties are composed of simple fundamental properties, this does not entail the non-existence of the complex properties they compose. This second point, a rejection of mereological reductionism concerning properties, is relatively uncontroversial. The first claim, that there might be

frame our discussion of identity in terms of shared sets of properties or shared sets of proper parts, we need some other principle to ground our notion of identity. Suárez remarks that "[...]unity implies a negation of division, and is therefore opposed to multitude, which arises from division or distinction[...]" (2007, p.16). Perhaps, in terms of the current subject matter, identity may be best cashed out negatively: A is identical with B when no distinction obtains between the two entities. Where there is no division or distinction, there is no multitude, and so there is but a single entity, and therefore identity. In order for such a treatment to be informative, naturally, an essay then needs to be given of what constitutes such a distinction (what the Scholastics call a 'real distinction'), and how this might be juxtaposed with other classes of distinction. The rest of this chapter focuses on giving such an essay.

5.2 Distinctness and the 'Problem of Trope Simplicity'

Some things are really, fundamentally, ontologically distinct; that is, for some A and some B, $A \neq B$. Socrates and Plato were really distinct people; the University of Durham is really distinct from the University of Cambridge; the two hydrogen atoms in a water molecule are really distinct from one another. That such real distinctions abound I take to be uncontroversial, although there may be cases where positing such a distinction does arouse controversy.⁹² In some cases where we draw a distinction, no such distinction exists in reality, the distinction is purely an act of our intellect. For instance, when we distinguish between Hesperus, Phosphorus and Venus, these are clearly really distinct names, but what they name is a single entity: the second closest planet to the Sun in our solar system. The distinction drawn conceptually (the early Greeks took Venus-in-the-morning, or Phosphorus, and Venus-in-the-evening, or Hesperus, to be two genuinely distinct celestial bodies) is not reflected at the fundamental, ontological level—the subject of a discussion about the distinction 'between' Hesperus and Phosphorus is only a single entity, the planet we call Venus, and there is no more to the distinction than a conceptual mistake—taking

complexity all the way down, is much more controversial. Furthermore, an account of the identity of a simple in non-mereological terms has good prospects of being applicable also to complex wholes, whereas a compositional account cannot ever be applied to a non-composed simple. Martin is also committed to the view that there exists a fundamental level of simple properties (see section 1.4 of this thesis). For these reasons, I will not attempt to resolve the matter at hand by making recourse to mereological or compositional accounts of identity, Armstrong's arguments notwithstanding.

⁹² What constitutes such real distinctness shall be further addressed below in section 5.4.

what is in fact one planet to be two. Perhaps an even stronger example would be the distinction we make when we state that $A=A$. Here we engage in some holding-apart or double-consideration of an entity we know (indeed, in the act affirm) to be one.⁹³ That some distinctions are merely the result of our own intellect I also take to be uncontroversial; although again there may be cases where positing that some putative distinction is merely a mental distinction arouses controversy. Much of this chapter will focus on the question of whether a distinction can exist between these extremes—a distinction which is not so great as a real distinction at the fundamental ontological level, and yet which has some foundation in reality such that it is not *merely* a product of our mistakenly taking one thing to be two—and on the nature of such a distinction.

It is precisely this sort of distinction that has been drawn recently in literature within the trope/universal debate.⁹⁴ In response to ‘the Problem of Trope Simplicity’,⁹⁵ both Campbell and Gibb appeal to a ‘formal distinction’, which Campbell states is meant “as Scotus used the term” (1990, p.56).⁹⁶ Campbell goes on to explain the drawing of a distinction between a trope as a particular and as a characteriser is a matter of abstraction, one that in no way “involve[s] conceding that a trope is after all complex (a union of particularity with a nature-providing property)”, coupling this with the claim that the particularity of a trope is “incapable of distinct and independent existence” (*ibid.*). Tropes are simples, not complexes, they do not have a particular-part and a characterising-part

⁹³ See Suarez (2007, p.18) for some discussion of this sort of mental distinction.

⁹⁴ Proponents of both tropes and universals have made recourse to such a distinction, and so I take the validity of these distinctions to be uncontroversial at least within the confines of this debate. As shall be seen in this section, such a distinction is drawn in defence of trope ontologies, and also employed in Mertz’s so-called ‘moderate realism’ (which may be seen as something of a halfway-house between trope-theory and realism about universals). As Mertz notes, realists who accept bare particulars, such as Armstrong (for instance, 1997) make use of this sort of distinction in maintaining the simplicity of universals whilst absorbing the predication-tie into these entities (2001, p.47, fn.11).

⁹⁵ Briefly, the claim that it is incumbent on the proponent of trope theory to explain how they can simultaneously maintain the claims that tropes are simple and that tropes have both a particularising nature and a characterising nature. This sort of objection to trope theory is levelled, for example, by Armstrong (2005) and Hochberg (1988), (2002) and (2004). For a full discussion see Gibb (forthcoming).

⁹⁶ It should be noted that the correct way to interpret Duns Scotus’ use of the term is a controversial matter, and that Scotus has even been accused by Suarez of equivocating in his own use of the term (2007, p.27). Therefore Campbell’s claim to be using the term in the same manner is somewhat uninformative.

which compose a trope-whole.^{97 98} We draw the distinction between being a particular and being a characteriser only because we are considering tropes in an abstract fashion, attending selectively to only a portion—the particularity—of the (simple, unified) nature of their being. This distinction is not merely mental, tropes are both really particulars and really characterisers; these are not mistaken names for the same thing as is the case of Hesperus and Phosphorus; but this particular-ness and characterising-ness are true of a single, unitary ontological simple: a trope.

Gibb advances a defence of trope simplicity, which, whilst it also makes use of this sort of distinction, differs from Campbell's in important ways. She comments that some “may feel uneasy about Campbell’s claim that we can focus on the particularity of a trope in abstraction from its nature” (forthcoming). However, it seems much less controversial to claim that we can abstractly consider the nature of a trope apart from its particularity.⁹⁹ Whilst Campbell fails to offer an explanation of the grounding of this distinction in reality (which nonetheless is less than a real distinction), Gibb does have an account of what licenses the claims that tropes are both simple and can play the dual roles of particular and characteriser. We are mistaken to think of the particularity and nature of a trope as parts of a trope:

The particularity and nature of a trope are not constituents or ingredients of it which could in some way come apart. It is not that a trope *has* a nature and *has* a particularity. Rather, a trope *is* a nature and *is* a particular. (forthcoming, p.16)

'Nature' and 'particular' are ontological categories to which tropes belong. An entity's belonging to a formal ontological category is not a matter of it having or instantiating some further, also entity-like, property. To say 'a trope is a particular' is to ascribe what Gibb calls a formal ontological predicate to the trope, and not to ascribe the property of 'particularness'. As is discussed in section 1.4 of this thesis, there are good reasons to reject the notion that all meaningful predicates pick out properties:

⁹⁷ For some interesting puzzles arising from Campbell's employment of this sort of distinction in this case and others, see Moreland (1989) and (2002). As they are not pertinent to the discussion at hand, I shall not rehearse them here.

⁹⁸ Ehring (1997) and (1999) and Robb (2005) also defend tropes as simple. However, their arguments do not make use of the Scholastic distinctions under discussion here. Gibb (forthcoming) discusses some problems with the line of response taken by Robb.

⁹⁹ It seems far less controversial to propose that we can attend to what is common to all white pieces of A4 paper without attending to the particularity of one specific sheet than it does to propose we can attend to what is particular about the whiteness of this specific sheet without attending to that whiteness itself.

These predicates do not pick out properties, for they are formal ontological predicates, which serve to categorise the elements of being and hence should not be included amongst the elements of being. (*ibid.*, pp. 16-17)

Thus, a real distinction (that is, a distinction between thing and thing) cannot obtain between a trope's nature and a trope's particularity, as these categories and their correlative predicates are not "bits of being that could be separable in reality" (*ibid.*, p.18); categories are not thing-like. However, truthmakers for statements such as 'a trope is a particular' are not mind-dependent, as the facts of ontological categorisation are "fundamental, objective, exist[ing] independently of us" (*ibid.*). Thus, the distinction between a trope-as-particular and a trope-as-nature is less than a real distinction between thing and thing, a distinction which obtains between two different entities, but rather is founded upon the two ontological categories to which, in virtue of its nature, the trope belongs, and is thus more than a mere product of our mental activity. This sort of distinction does not entail that tropes are complex, and so trope simplicity is defended.

Mertz defends an ontology of 'unit attributes' or 'relation instances'.¹⁰⁰ These are taken to be ontologically basic and simple entities. Yet they consist of what Mertz delineates as two aspects: one combinatorial and the other intensional (2001, p.47; 2002, p.168). The combinatorial aspect of the 'relation instance' determines what it is that this 'relation instance' ties together; the intensional aspect determines the character the entities tied have in virtue of being thus tied. It should be easy to see how a similar problem to 'the Problem of Trope Simplicity' arises for relation instances; namely, how can it be maintained that these are constituted by both a combinatorial and an intensional nature, and yet are simple entities? Mertz, like Campbell and Gibb, appeals to a distinction that is less-than-real but greater-than-merely-mental, by "[...]positing a basic ontic unit[...] that is internally simple, yet sustains the foundations for two distinguishable aspects[...]" (*ibid.*, p.46).¹⁰¹ He goes on to recognise that "[T]his requirement of a dual distinction said of a simple entity is for some enigmatic, if not straight-out contradictory," (*ibid.*) leading him, to a certain extent in Mertz (2001) and to a much greater degree in (2004), to offer a detailed account of how the types of distinction discussed in this section might be understood and assayed ontologically speaking. It is to this account, which for reasons to be detailed below I find ultimately unsatisfying, that we turn in the next section.

¹⁰⁰ For a full account, for which there is not space here, see for example Mertz (1996).

¹⁰¹ However, just as Gibb's account differs significantly from Campbell's, Mertz's differs from both; the three are similar just in their positing of the sort of distinction being discussed in this chapter.

5.3 Mertz on Simplicity and Distinctness

Mertz glosses what he considers our traditional notion of simplicity as below:

(5.i) an entity is simple when it “*has no proper parts, is non-composed, or is (actually) undivided and (potentially) indivisible*” (2004, p.89);

he supplements this with a definition:

(5.ii) x is simple =_{df} x has no proper parts (*ibid.*, p.93).

(5.i) and (5.ii) entail that any entity which has discrete or distinguishable parts which compose it as whole cannot be a simple. All such entities are complex. Mertz, however, argues for the abandonment of these notions of simplicity. ‘Simplicity’, he claims, “is to be seen as not the contradictory of ‘composite’ but rather as equivocal between the non-composite or ‘absolutely simple’[...] and the composite[...] the ‘continuously simple’.” (*ibid.*, p.95). (5.i) and (5.ii) adequately capture the notion of absolute simplicity, but fail to take into account an equally valid species of simplicity: ‘continuous simplicity’. An entity is taken to be ‘continuously simple’ when its nature *does* admit of some composition, but there is no ‘ontic distance’ between the composing constituents.

‘Ontic distance’ obtains when there are genuine distinctions between the parts of a composite whole. For Mertz, genuine distinctions are marked by the need for there to be some particular constituent of the whole whose role it is to bring together the disparate parts into a state of unity:

[...]all internal division is marked by the requirement that one of the constituents have the special causal status of agent unifier among the remaining constituents[...] in order to bridge the division and effect what is a manifold whole. (*ibid.*, p.91)

Any wholes so composed are designated ‘articulated composites’. That they are both united into a whole, and yet really distinct is to be understood on the following analogy:

[...]the interval nature of a relation as an ontic predicate and among discrete relata implies a holding-apart of its subjects even as it holds them linked (together-as-a-distance), on the analogy of a rigid connecting rod[...] (*ibid.*, p.109)

It is the ‘rigidity’ of the constituent agent unifier which both marks and maintains ‘ontic distance’. In juxtaposition to standard (‘articulated’, and therefore genuinely complex, non-simple) composites, and correlating to the abovementioned notion of ‘continuous simplicity’, Mertz introduces a class of entities he calls ‘continuous composites’:

In supposed composites whose constituents are only formally distinct there would be no 'ontic distance' between yet distinct constituents that would require an agent unifier to bridge. (*ibid.*, p.91)

This joining is the unity of a *continuous composite*, i.e., a union of two distinct entities without the agency of a further interposing ontic predicate or act of unification. (*ibid.*, p.105)

How we are to understand these non-complex composites is not immediately apparent. The difficulty stems from explaining how it is that these composite wholes are properly called composite. In the case of a standard composite, recourse can be made to the presence of the agent unifier: it is the very presence of this constituent that licenses our claims that the entity being considered is genuinely a whole-composed-of-parts in two important senses. First, as opposed to being a mere aggregate or sum, and secondly, as being a case of composition of distinct constituents, and not a mere blob. The togetherness-at-a-distance provided by the 'rigid connecting rod' of an agent unifier seems, *prima facie*, to be a key concept in understanding composition *per se*. Composition, in the case of the 'continuous composite' must be understood according to some other standard.

One analogy Mertz offers for understanding 'continuous composition' is that of the heterogeneous continuum, such as a colour wheel:

The coloring of the whole is not homogeneous yet there are no internal boundaries marking numerically distinct regions of different colors. The disk is, phenomenally, a continuous composite and as such a simple entity. The unity of a continuous whole is a continuum of the yet distinct—a fusion without diffusion, a concretion without an identity-obliterating blending. (*ibid.*, p.94)

This analogy, I contend, is of little use for understanding the notion of continuous composition as Mertz wishes to employ it. The concept has been introduced in order to elucidate the defence of unit attributes from a problem raised by their having a dual-nature as both combinatorial and intensional. A heterogeneous continuum of differentiated but blended colours can be made sense of because each specific colour-point on the wheel stands in relation as determinate (say, scarlet) to an overarching determinable (colour)—a relation which it shares with every other point on the continuum. The spectrum is specifically a *colour* spectrum, an arrangement of determinate colours ordered according to their resemblance to each other. Likewise, we can easily conceive of a sound-spectrum, say a continuous change in pitch or tone. What is much harder to conceive of would be a single, *continuous* colour-and-sound spectrum. Combinatorial-ness and intensional-ness do not seem to share a relation to any single overarching determinable. A continuous spectrum from combinatorial-ness to intensional-ness would be much more like the

(somewhat inscrutable) notion of a continuous colour-and-sound spectrum than a colour wheel. Indeed, just as it is hard to understand what might be meant by a colour-and-sound spectrum, it is hard to conceive of combinatorial-ness to intensional-ness partaking in any kind of continuum. Even if we concede that the example of the heterogeneous colour wheel lends support to the plausibility of the class 'continuous composite', it does not seem to give us any reason to suppose that relation instances, as Mertz characterises them, should be properly thought of as belonging to that class. Indeed, if continuous composites are like colour wheels, then, for the reasons given above, if anything, the example suggests relation instances *should not* be thought of as belonging to that class.

The same holds for Martin's properties. It is hard to see how disposition and quality might partake in any kind of continuum, and indeed Martin explicitly rejects this notion; he says of properties that "[...]there are no *degrees* within the limit by which a property is categorical or dispositional[...]" (1993b, p.184) and without *degrees*, no possibility of either a homo- or heterogeneous continuum. It is equally difficult to see how the particularity and nature of a trope could be seen as composing some sort of heterogeneous continuum (I take pains to stress that neither Gibb nor Campbell suggest that they might). The point is that Mertz's analogy to a colour-disc not only fails to be apt to help explain his unit attributes, but makes for an inappropriate analogy to all the types of entities discussed in this chapter. It is to these entities that the formal distinction has been applied. If the analogy of the colour-disc is, as Mertz holds, supposed to illuminate this distinction, then the fact that it fails to comfortably analogise to *any* of the entities to which various contemporary metaphysicians have wished to apply the formal distinction (including Mertz himself) suggests that either: (i) the distinction is being misapplied or (ii) the analogy is mistaken, and the colour-disc example does little to illuminate our understanding of the formal distinction. (ii) is by far the more palatable consequence to accept, and can draw support from the fact that, as will be seen in the following section, taking the formal distinction to be best explained in terms of heterogeneous continua lacks basis in the works of the Scholastics from whom we inherit such distinctions. Mertz's analogy should be rejected, and a suitable assay of the ontological basis for these sorts of distinction is still wanting.

Mertz re-visits the analogy towards the end of the paper:

It is continuous in having no inherent boundaries or divisions between colors, and thus is undivided and so simple, yet it is composed of distinguishable colors so known by selective attention[...] (*ibid.*, p.124)

The key claim here is that in the case of such a continuum (say we grant the analogy for the moment) the only distinction that applies to the constituents of this supposed ‘continuous composite’ are those imposed by “selective attention”, by abstraction. However, this is a claim that is, at the very least, open to challenge. There are no regions on the colour wheel that are indeterminately coloured; that is, every property instantiation falling under the determinable ‘coloured’ is some fully determinate colour. Let us consider that this colour wheel is exhaustive but minimal; that is to say on it is represented every possible determinate colour, and each is represented once and once only. Thus, any given region on the colour wheel is distinct from any other, in virtue of being differently coloured from any other region.¹⁰² Is this distinction imposed by our selective attention? It does not seem so. Fully determinate colours differ from each other in terms of brightness, saturation and hue, and these are not products of our ‘selective attention’. Any appearance to the contrary is merely an artefact of our limited perceptual abilities, which give rise to the illusion of “no inherent boundaries or divisions between colours” (*ibid.*). Hence, in the case of ‘continuous’ colour wheels, genuine distinctions obtain between regions. If we accept colour wheels as providing an illuminating analogy for ‘continuous composites’, then it seems we should conclude, contra the specified nature of a ‘continuous composite’, that fully real distinctions obtain between the components in these cases, and thus ‘continuous composites’ collapse into ‘articulated composites’. In raising this objection to Mertz’s analogy, I aim to remain as neutral as possible with regards to the metaphysics of continua. Whether the colour wheel can be analysed down to discrete points (as atomism would hold) or whether the regions discussed above are themselves smaller continua tending towards the infinitesimal, what is clear is that any such region differs from every other region in virtue of instantiating at least one different property to the other regions. *Ex hypothesi* each region is differently coloured, and this can only be explained by the regions having different properties. Even if we were to accept that the latter position entailed that no region, regardless of size, is homogeneously coloured, it should still be clear that each such region is distinct from any other region by being differently coloured, and this will continue to be the case all the way down.

¹⁰² I apply the restriction of minimalism here for simplicity and in order to give Mertz’s claim a fair run: it should be clear that if each colour *really* appeared *more than once*, we would *ex hypothesi* be applying a distinction between those instances (that is what would make them more than one instance!) that was not the result of abstraction, and thus be begging the question against Mertz.

The points raised above show that there is little prospect of any fruitful illumination of the concept of ‘continuous composition’ by analogy to colour wheels. Another potential explanation of this type of composition would be to claim that there is no need of an agent unifier as constituent because the constituents themselves have it in their nature to unite directly one to the other (perhaps in analogy to two pieces of Lego in juxtaposition to two pieces of an Airfix model).¹⁰³ However, such a position may be in danger of generating a Bradley-style regress; for if the constituents (in Mertz’s case the combinatorial and intensional natures of relation instances) each also had some kind of uniting nature, it would seem that they themselves were ‘continuous composites’ (of combinatorial-uniting and uniting-intensional kinds). And if in turn their ‘continuous composition’ is to be explained by each constituent having a uniting nature then... it should be easy to see the problem here. As this potential explanation is not endorsed by Mertz, having identified what *prima facie* appears to be a substantial problem, we shall pass over it without further comment.

Perhaps the key to understanding the composition in the case of a ‘continuous composite’ is to be found in a deeper analysis of Mertz’s claim that the constituents in such cases are “only formally distinct” (*ibid.*, p.91). Mertz states that “With a formal distinction there is a differentiation—a rendering discrete—by intellectual separation of what is founded in and is partial to a fuller undifferentiated *in se*” (*ibid.*). Accordingly, that which is formally distinguished is so in virtue of certain mental operations regarding the subject, whereas the purported extremes of this distinction, by the above statement, are in fact, in themselves undifferentiated. Mertz relates this to composition:

If[...] there were such an entity [a ‘continuous composite’] then any actual differentiation of constituents could only be ‘external’ and the result of an act of cognitive abstraction, what has been called in the tradition a ‘formal distinction’. (*ibid.*, p.90)

It seems then, that composition in the case of the ‘continuous composite’, is predicable not of the entity in question in and of itself, but rather in virtue of abstractive conceptualisations of that object which involve some partial consideration. If this is the case, it is hard to see how this is a case of composition involving constituents. Perhaps we are merely meant to take ‘continuous composite’ as a term of art designating that which is taken as distinct as the result of partial or abstractive consideration. Furthermore, that the differentiation occurrent in a ‘continuous composite’ is a product of mental activity seems

¹⁰³ Although not one, to my knowledge, that Mertz endorses.

at tension with Mertz's characterisation of such entities quoted above, that this is "a unity of two distinct entities" (*ibid.*, p.105), and claims made elsewhere in the paper that the constituents of such entities are non-identical (for instance p.91, p.95, p.116, p.124). With regards to the first claim, if 'distinct' in this context means 'distinct in virtue of having been partially or abstractly considered', it is hard to see how this justifies calling such entities composites. This would also be directly at odds with the latter claim that the constituents in question are non-identical. For surely, non-identity between two entities cannot obtain in virtue of our mental activities, unless we want to concede that we ought to simply read off our ontology from our conceptual scheme. This is something, I, and I am certain many ontologists, would be unwilling to concede.¹⁰⁴ So, as this non-identity must be prior to the "act of cognitive abstraction" (*ibid.*, p.90), then it remains incumbent on Mertz to provide some explanation of how a 'continuous composite' is properly so called. Without such an explanation, the introduction of this class of entities does nothing to elucidate how it can be that some entities, as Mertz, Gibb and Campbell wish to maintain (albeit in different ways, with different arguments and for different reasons—apart from making recourse in some way or another to the resources of Scholastic metaphysical distinctions, their positions should not be identified), are simple and yet properly admit, found and support a distinction—a distinction which is more than a mere artefact of our minds, and yet, due to the simplicity of the entity, less than a real, fundamental, ontological distinction between two entities.

In order to further the project of developing a suitably nuanced and detailed assay of the ontology of this sort of distinction, such that this might throw light on Martin's claims about the nature of property, the next section of this chapter will examine the material drawn on by the authors mentioned so far: the Scholastic philosophy of John Duns Scotus and Francisco Suárez.

¹⁰⁴ If we were to accept this as an acceptable metaphysical principle, we would have to say, for instance, that prior to the astronomical discovery that Hesperus and Phosphorous were in fact two names for one celestial body, when they were taken to be two distinct entities, then ontologically speaking, there *were indeed* two distinct entities, each picked out by one of these names. Subsequent to the discovery, tracking the shift in conceptual schema, there would have been an ontological shift to a single entity, Venus, and Hesperus and Phosphorus cease to be. The unattractiveness of such a position I take to be immediately apparent.

5.4 Duns Scotus, Suárez and Distinctions

Both Duns Scotus (*Ord.* 2, d.2, pars I, q.2, nn. 92-94) and Suárez (2007, pp. 16-18) accept and discuss the two uncontroversial distinctions, the real and the mental, discussed above. Suárez sees the marker of a real distinction as being separability. Entities A and B are really distinct only if they can be separated and both continue to exist, or if their separation is what he calls 'mutual', that is, if their separation leads to the ceasing-to-be of one of the entities—this can be *either* A *or* B—it is not of necessity always one or the other (*ibid.*, section II). However, as he notes, there may well be cases where two really distinct entities have always existed conjoined, and so we may not have evidence of their separability (whilst in some cases we may be able to infer this separability from similar cases, there may be cases where this is not possible) and so a real distinction may evade our notice. Whilst separation—or knowledge of its possibility—is sufficient for a real distinction, it is not necessary. The possibility of separation *is* necessary, but we may be even in principle unable to be aware of this possibility in certain cases (*ibid.*). King attributes a very similar position to Duns Scotus (2003, p.21). When things are really distinct, this is a distinction of “one thing and another” (*ibid.*) or a “distinction between thing and thing” (Suárez, 2007, p.16). Mental distinctions exist when the distinction is either totally or partially a result of an act of the intellect.¹⁰⁵ Suárez distinguishes between two types of mental distinction: the ‘distinction of the reasoning reason’ (*distinctio rationis ratiocinantis*) and the ‘distinction of the reasoned reason’ (*distinctio rationis ratiocinatae*). The former is a mere mental separation, such as that made in stating ‘A=A’, which “arises exclusively from the reflection and activity of the intellect” (*ibid.*, p.18), whereas the latter is taken to have “a foundation in reality” (*ibid.*).¹⁰⁶ Scotus calls the latter a *distinctio rationis a parte rei* (a ‘real conceptual distinction’—see King, 2003, p.22). In the rest of this thesis, when I speak of a ‘distinction of reason’, it is meant in this latter sense: a distinction at least partially constituted by or owing to some act of the mind but nevertheless finding some grounding, foundation or license in the way things really are.¹⁰⁷ Distinctions of the former sort will be referred to as

¹⁰⁵ As in the cases of partial consideration and abstraction discussed above.

¹⁰⁶ The ‘distinction of the reasoned reason’ will be discussed in more detail below.

¹⁰⁷ Suárez’s terms, whilst precisising, are unweildy, and Duns Scotus’ misleading—this distinction is not a real one (in the sense discussed so far in this chapter), indeed the term ‘real conceptual distinction’ is verging on the oxymoronic, when in Duns Scotus’ metaphysics ‘real’ and ‘conceptual’ are opposing classes of distinction!

'mere mental distinctions'; although these will be subject to far less discussion. Both Duns Scotus and Suárez also discuss 'formal' and 'modal' distinctions, more of which below.¹⁰⁸

Distinctions of reason are (at least) partially a result of the way in which we take things to be; when we draw a distinction through our concepts, say, which is not reflected at the fundamental ontological level. However, unlike a mere mental distinction, these distinctions are *appropriate*, and have their foundations in the way things really are, and we are led to make such distinctions by the nature of things themselves. In the case of a distinction of reason between A and B, $A=B$, but there is something or other *about* how A/B is in itself which licenses our drawing of this distinction.¹⁰⁹ A distinction of reason:

[...]arises not entirely from the sheer operation of the intellect, but from the occasion offered by the thing itself on which the mind is reflecting. Hence the foundation that is held to exist in nature for this distinction is not a true and actual distinction between the things regarded as distinct[...] Rather the foundation must be either the eminence of the object which the mind thus distinguishes (with a distinction that many call virtual), or at any rate it must be some reference to other things which are truly distinct in the real order, and with respect to which such a distinction is excogitated or conceived. (Suárez, 2007, p.18)

However, these distinctions cannot be said to be real distinctions, distinctions between thing and thing, as that which in reality provides a grounding or foundation for the conceptual drawing of such a distinction is a single entity. Suárez holds distinctions of reason to hold when "the whole reality contained in the object is not adequately represented, nor is its entire essence and objective notion exhausted", they are the result of "precise abstraction" (*ibid.*, p.19). Here we can see the ontological foundation of such distinctions. What are taken to be two extremes of a distinction are genuinely partial representations of what is in fact unitary: the representations are veridical, it is only the taking of them to be representation of *two* different entities that is not. One requirement for the drawing of a distinction of reason is that, when A and B are taken as diverse under their relative concepts C_A and C_B , there must be some "formal diversity in the objective concepts" (*ibid.*, p.60). If there were no such diversity, we would have a mere mental distinction, such as the distinction between Hesperus and Phosphorus. This is a particularly important point if one is to be a realist about concepts. If one is a realist about concepts,

¹⁰⁸ It should be noted that each means something quite different by 'modal distinction'.

¹⁰⁹ It is worth noting at this point that where Mertz (2004, p.91) equates "formal distinctions" with "distinctions of reason that have their foundations in things" he may be equivocating—these terms are supposed pick out different types of distinction, as shall be seen below.

then concepts may occupy a thing or at least thing-like role within ones ontology. This being the case, then there would be a real, fundamental, ontological distinction between C_A and C_B in the case of a distinction of reason; they would be distinct as thing-and-thing. This real distinction between concepts may then go some way to explaining the foundation of the distinction of reason in the way things really are.¹¹⁰

Duns Scotus (2012, p.235-243) also discusses a kind of distinction which plays a central role in his metaphysics; what he calls the 'formal distinction'. As with the distinction of reason, despite a formal distinction being drawn between A and B, really $A=B$. Thus a formal distinction is less than a real distinction between "one thing and another" (*Ord.* 2, d.2, pars I, q.2, nn. 92-94). However, unlike a distinction of reason, the formal distinction is not held to be a product of the intellect; it exists antecedently to any act of the mind.¹¹¹ The basis of the formal distinction is that some really singular entities admit of a plurality of *rationes*. A *ratio* "picks out a set of features that make something to be what it is" (King, 2003, pp. 22-23).¹¹² *Rationes* are mind independent, our mental activity plays no role in delineating what sets of features make things what they are: these are objective facts *discoverable* by us, not something we *create*. A formal distinction arises when one entity admits of two (or more) *rationes* which do not include one another in the features they specify.¹¹³ Duns Scotus uses a number of terms for the items held distinct by a formal distinction, with various connotations, however, I will persist in the use of neutral terminology here. (See King (*ibid.*, p.23) for an account.) Duns Scotus' formal distinction

¹¹⁰ Even if we are not realist about concepts, Suárez asserts a "negative real distinction" that holds between distinct non-beings. This is called a real distinction on the grounds that *if* the non-beings *were* beings, then a real distinction *would* obtain between them (2007, p.17).

¹¹¹ Here we see that the distinction drawn by Mertz (2004) is far closer to the distinction of reason than Duns Scotus' formal distinction. Campbell's distinction also looks closer to the distinction of reason, despite his claims to the contrary. Gibb's account, drawing on the resources of categorial ontology, is more in the spirit of the formal distinction.

¹¹² On first glance Duns Scotus' *rationes* seem to bear comparison to Fine's (see for instance, 1994) notion of a 'real definition'. However, whilst Duns Scotus holds a single entity to admit of multiple *rationes*, *prima facie* Fine's position would seem to permit only a single 'real definition' to apply to a single entity, and thus the positions ought not to be equated.

¹¹³ Note that, therefore, a formal distinction will *not* hold in cases of determinate/determinable relations: whilst a scarlet disc admits of multiple veridical *rationes*, one picking it out as the very determinate shade of scarlet it is; one picking it out as red; one as coloured and so on, the more determinate *rationes* are included in the most determinable *ratio*, and so on down the hierarchy, and so there is no case of formal distinction here.

raises some difficult questions; namely, how could it be that an entity is such that it admits of a definition of its being by a plurality of *rationes* without either:

(5.iii) It being a plurality of beings; that is, including some real distinction;

or:

(5.iv) These *rationes* being somehow partial or abstractive from some comprehensive and complete *ratio*, and thus being partially constituted by the mind.

Suárez only discusses the formal distinction in relation to Duns Scotus' work, but this problem is one that he raises, and which leads him to conclude that this term is "excessively equivocal" (2007, p.27) as:

The formal distinction is of wider extension, and can be greater than the distinction from the nature of the case [Suárez's modal distinction, to be discussed below][...] [F]rom another point of view it can be a lesser distinction[...] applied to formalities as conceived in a state of precision by our minds. In this latter sense the distinction does not exceed the level of a mental distinction. (*ibid.*)

The formal distinction, it is argued, must collapse into one of the two distinctions discussed above. Either it is a real distinction between thing and thing (perhaps held to apply to a single entity because of cases such as those that Suárez mentions in his discussion of separability, where we have never had experience, nor can infer from analogy, the separability of two things we have only encountered conjoined) or else our intellect plays some role in determining the division of the partial *rationes* away from the comprehensive and complete *ratio* of the singular, unitary entity in question.¹¹⁴ Whether or not the criticisms of the formal distinction raised here stand will be addressed in the next section of this chapter.

Both Duns Scotus and Suárez discuss another type of distinction, which they each call the 'modal distinction', although they mean quite different things by this term.¹¹⁵ Here I shall address only Suárez's account, as it is the more pertinent to our current enquiry.¹¹⁶

¹¹⁴ Suárez also suggests that arguments in favour of Duns Scotus' formal distinction are question begging. This claim is employed to lend further support to the claim that the distinction collapses into one of two positions described above. See the text for further details (2007, pp. 26-77).

¹¹⁵ Suárez also calls this the 'distinction from the nature of the case', for brevities sake I shall use the term given above.

¹¹⁶ Duns Scotus' modal distinction is held to obtain between qualities that admit of degrees of intensity and the specific degree of intensity (or 'intrinsic mode') of a particular instance of that

Suárez's modal distinction at first glance appears very similar to Duns Scotus' formal distinction:

[...]there is among created things a certain actual distinction which is found in nature prior to any activity of the mind, and that such distinction is not so great as the distinction between two altogether separate things or entities. This distinction, to be sure, could be designated by the general term "real", inasmuch as it is verified in reality, and is not merely an extrinsic denomination issuing from the intellect. (*ibid.*, p.27)

However, whereas Duns Scotus' formal distinction was taken to obtain where we have distinct items A and B somehow genuinely held distinct but, in reality, A=B, Suárez's modal distinction obtains between some thing A and a mode of that thing C. In these cases the distinction cannot be so great as a real distinction, a distinction between thing and thing, precisely because C does not belong to the category 'thing'. In this sense, there is only one thing which is being discussed, A. Furthermore, Suárez maintains, a mode, of necessity, cannot survive separation from that of which it is a mode—and separability is the marker of a real distinction. Modes are, however, entities in a broader sense, in that they have some essence:

Essence can mean strictly a nature sufficient of itself to constitute an entity in the real order, or, more widely, any real principle that is constitutive of real being or mode. In this latter sense we concede that there are distinct essences in a thing and in a mode, and hence that objectively there is between them a distinction which in some sense is a real distinction. (*ibid.*, p.39)

As the distinction between a thing and its mode is a result of the difference in essence of these entities, it cannot be a mental distinction; our intellect plays no role in determining the essences of entities. Yet it cannot be so great as a real distinction, for only one extreme is a thing. Thus thing and mode, whilst not held apart by a mental distinction, are "distinct with a lesser distinction, which is properly called a modal distinction" (*ibid.*, p.32). Clearly the plausibility of (and the motivation for positing) Suárez's modal distinction turns on whether or not we wish to include modes as he conceives them and accept that there are non-thing-like entities included within our ontology.¹¹⁷ However, if we do accept such

quality. As 'disposition' and 'quality' are not instances of different intensities of a single quality (see sections 3.2-3.3), this distinction is not relevant to our attempts to provide an assay of their ontology. (See King (2003, p.25) for a fuller discussion.)

¹¹⁷ I say thing-like because we might accept entities that are not 'things' but still hold that we could, for the purposes of drawing distinctions and identities, treat them in the same manner as we treat things.

entities, the lesser or minor real distinction Suárez draws between a thing and its mode appears sound, although it should be noted limited in its application to such entities.

Over the last few sections we have examined and analysed a variety of notions of distinctness and sameness. In the section to follow I will begin to sketch how such notions relate to our interpretation of the Limit View—the relevance of these various approaches to distinctness to the Limit View and Martin’s key claim of ‘surprising identity’, should at this point I hope, be clear.

5.5 Understanding Surprising Identity

This chapter has been concerned with a number of accounts of distinctness and identity, and in particular with accounts that admit of some sort of distinction that is taken to be less than a distinction between two fundamentally separate things, but is more than a mere mental distinction. In this section I shall return to each of the distinctions that have been discussed so far (some far more briefly than others) with a view to exploring how they might shed light on Martin's claim that whilst dispositionality and qualitativity are both identical with a unitary property (and thus with each other), nevertheless there obtains a distinction between them which is more than merely in-the-eye-of-the-beholder. I shall first very briefly discuss those accounts which I take it to be readily apparent are not of much use in understanding this claim, before moving on to focus in more detail on those that exhibit more promise.

It should be immediately clear that neither a 'real distinction' nor a 'mere mental distinction' as discussed in this chapter are appropriate as analyses for the distinction Martin is claiming obtains between disposition and quality: the first is denied by the surprising identity thesis; the second by the claim that the distinction is more than in-the-eye-of-the-beholder. Campbell's account lacks sufficient detail to provide a satisfactory assay of what it is, ontologically speaking, that explains and provides a foundation for his notion of a formal distinction. Moreover, it seems to be based purely on our abstractive abilities, and so plausibly amounts to nothing more than a mere mental distinction. On this basis there is little prospect of illuminating Martin's position by making recourse to Campbell's employment of the formal distinction. The problems identified with Mertz's account (see section 5.3) are significant, and on their basis his account cannot be of any use in the present endeavour. Given the arguments discussed above, Duns Scotus' 'formal distinction' does seem to collapse into either a real distinction or a distinction of reason

and so I shall not discuss it here as a separate class of distinction. This leaves Gibb's account; Scholastic accounts of the distinction of reason and Suárez's modal distinction. I shall examine each of these in turn, exploring how they might help us to understand Martin's claims about the nature of properties.

The modal distinction as discussed by Suárez is, whilst not a real distinction between thing and thing, still greater than a mental distinction as its foundation is not to any degree mental. Rather the distinction stems from the difference in essence between a thing and some mode of that thing. As modes are not things, the distinction is not a real distinction. Applying Suárez's modal distinction to Martin's account of property would require that properties are treated in a thing-like manner, whilst 'disposition' and 'quality' would be modes of being of the property. However, prospects for such an application are not good. The category of modes in Scholastic metaphysics includes the real accidents (all real accidents, which seem the closest analogue to Martin's sparse properties, are modes, although not all modes qualify as real accidents). So if properties themselves are modes, they cannot play the role of the 'thing-side' in Suárez's modal distinction. Rather, the 'thing-side' ought to be filled by a substance. As Martin holds a two-category ontology in which property and substance are the two fundamental and exclusive categories (see section 1.4), a property cannot also be a substance, and so cannot be that in which a mode inheres, and so is not a suitable candidate for partaking in the 'thing-side' of the modal distinction between a thing and its mode of being.

Gibb explains how a trope can be both a particular and a characteriser whilst remaining a unitary, singular entity by appeal to categories of being, which are not themselves 'bits' of being. Thus, a singular unitary trope is a particular in virtue of belonging to the formal ontological category 'Particulars' and a characteriser in virtue of belonging to the formal ontological category 'Characterisers':

The particularity and nature of a trope are not constituents or ingredients of it which could in some way come apart. It is not that a trope *has* a nature and *has* a particularity. Rather, a trope *is* a nature and *is* a particular. (forthcoming, p.16)

If a similar logic is to be applied to the Martin case, then disposition and quality would need to be formal ontological predicates which indicate that entities that bear them belong to certain ontological categories: those of 'Disposition' and 'Quality'. Properties would then belong to these two categories, alongside either the category of 'Universals' or 'Particulars' (depending on which side one pitches one's tent in the trope-universal debate) and 'Characterisers'. To be a disposition or a quality is to characterise in a certain way. Thus, the

categories of 'Disposition' and 'Quality' would be sub-categories subsumed under the category 'Characteriser'. On this analysis, properties, a unitary singular entity, are properly described as dispositions in virtue of belonging to the formal ontological category 'Dispositions' and are qualities in virtue of belonging to the formal ontological category 'Qualities'. This explains the identity of the dispositional and the qualitative (it is but a single, unitary property which belongs to both categories) and maintains the more-than-in-the-eye-of-the-beholder nature of their distinctness. As Gibb reminds us:

But this [inseparability] does not mean that the distinction between a trope's nature and its particularity is merely a product of our mind, for ontological categorisation is not such a product. The distinction, as with any such ontological distinction, is a fundamental, objective one which exists independently of us. (*ibid.*, pp. 16-17)

Mutatis mutandis for Martin's account. However, the success of applying Gibb's account to Martin's position rests on the plausibility of taking 'Dispositions' and 'Qualities' as formal ontological categories.

As mentioned above, Gibb's approach seems, *prima facie*, to be making an appeal to something akin to Duns Scotus' formal distinction. However, we have seen arguments from Suárez to suggest that the formal distinction collapses into either a real distinction, or else a distinction of reason. It cannot be a real distinction to which Gibb is appealing, as this would imply that tropes admit of genuine composition, and so are not simple. Therefore, if Suárez's arguments are correct, then the distinction at work is in fact the distinction of reason. It is important, therefore, to examine this distinction in more detail. It should be noted that, if what I have said above is correct, if one interprets the surprising identity thesis via appeal to an account like Gibb's, then one seems to be committed to something like the obtaining of a distinction of reason between the dispositional and the qualitative. However, it does not appear that the converse is true: one could choose to interpret the surprising identity thesis by means of an appeal to the distinction of reason directly, without committing oneself to an account such as Gibb's.

The Scholastic distinction of reason is properly called mental, as it obtains at least partially due to an act of the mind—partial consideration or abstraction. However, it is more than a mere mental distinction (more than merely in-the-eye-of-the-beholder, as Martin would have it); it has a foundation in the way things are. So, 'disposition' and 'quality' would be terms which, whilst they applied to a single, unitary entity (the property) would refer to partial or incomplete representations of that object: the 'property-qua-

disposition' (ignoring all that said property contributes to the qualitative nature of its bearer) and the 'property-qua-quality' (ignoring all that said property contributes to the dispositional nature of its bearer). There needs to be more to the case than merely this abstraction to license the claim that such a distinction is greater than merely-mental, for abstraction is a purely mental exercise. Whilst the partial representations of the property have their foundation in the way things are, what is required is a foundation for their *distinctness*. Suárez locates this foundation in the distinction between the relative concepts involved (2007, p.60). 'Disposition' and 'quality' are *ex hypothesi* distinct concepts, otherwise there would be nothing *surprising* about their identity. So, if we are realists about concepts, and take them to be thing-like entities, then a real distinction obtains between the concepts 'disposition' and 'quality'. It is this real distinction which provides a foundation in reality for the claim that whilst disposition and quality apply to a singular unitary entity—a property—and dispositions and qualities are not really distinct, the distinction between them is more than merely mental as it is founded on the real distinction obtaining between their relative concepts. However, this sort of realism about concepts is controversial to say the least! If we do not consider concepts to be thing-like entities, then a real distinction cannot obtain between them, and so once again the question of the foundation that makes the distinction of reason more than merely mental is raised. This foundation is to be found in what Suárez calls the 'negative real distinction'. This distinction has modal foundations (in the contemporary sense, rather than as Duns Scotus or Suárez would use the term), as it applies to entities that *are not* thing-like (what Suárez call 'non-beings') which, *if they were* (thing-like) beings *would* be really distinct. This negative real distinction, if we are non-realist about concepts, would provide the foundation for our distinction of reason. The plausibility of applying the distinction of reason to Martin's account rests then on two things: accepting that properties are the sort of entity that admits of being partially represented as a disposition and partially represented as a quality; and also accepting *either* a realist theory of concepts *or* Suárez's notion of negative distinctions between non-beings.

This chapter has examined a number of approaches to identity and distinctness, from both the perspective of contemporary debates in property ontology and the Scholastic source material upon which commentators in these debates have drawn. These approaches have been related to Martin's Limit View account of property in order to throw light on the initially puzzling claims of the surprising identity of the dispositional and the qualitative, and that nevertheless the distinction obtaining between these two is more than

a mere act of the mind. Two approaches have been identified which, given the acceptance of certain additional theses, provide accounts of the ontological foundations for such a distinction. These two approaches, and how they relate to one another, shall be further examined in the next chapter.

Chapter Six: An Interpretation of the Limit View

The last five chapters of this thesis have provided an exposition of the quality/disposition distinction; examined the development of the Limit View in Martin's own work and discussed criticisms levelled against the Limit View and explored ways of explaining the surprising identity claim. The purpose of this chapter will be to draw together the findings of these chapters to provide a concise and clear interpretation of the Limit View. Arguments for the commitments outlined and claims made in this chapter are to be found elsewhere in this thesis, for this reason there will be extensive cross referencing of previous chapters in this one. This chapter begins with a brief review of a number of claims and theses that are key to properly understanding the Limit View. This is followed by an articulation of the commitments of the Limit View. It is then shown how this presentation of the Limit View can be interpreted under either of two potential accounts for explaining the surprising identity claim. The final section of this chapter will introduce the applications of the Limit View to be discussed in the two following chapters.

6.1 Review

Both an examination of the development of Martin's own presentation of the Limit View (see Chapter Three) and a consideration of how Martin's position can be successfully defended against his critics (see Chapter Four) help to identify a number of ancillary claims and theses which are key to properly understanding the Limit View. In this section I briefly outline each of these claims. Extended discussion of these claims, where necessary, has been completed elsewhere in this thesis and so shall not be entered into here. Rather, the purpose of this section is to state clearly and all in one place those additional theses required to make sense of the Limit View. I do not review here all of Martin's general metaphysical commitments (see section 1.4), as not all of these need be held in order to sensibly maintain the Limit View—it is to those that are required or provide useful illumination that I restrict myself.¹¹⁸

¹¹⁸ I shall not spend much time arguing that these particular claims are in fact required. I take it to be relatively clear in all the cases discussed why the maintenance of these supporting positions is needed. If the reader takes any of these to be in excess of requirements, then this seems to weaken the account none, the claim in question can simply be suspended or discarded as the reader sees fit.

(AC1) *The truthmaker principle*

Meaningful sentences (etc.) that represent the world as being some way or another are either true or false. When such a sentence is true, it is so in virtue of the world being some particular way: the very way it is represented as being. This way that the world is is a truthmaker for the true sentence (2007, pp. 24-25). Sentences that lack truthmakers, or that have *falsemakers*—Martin countenances absences as truthmakers for negative existentials such as "There are no arctic penguins", and falsemakers for their corresponding existential sentence "There are some arctic penguins" (see Martin in Crane, ed. (1996, pp. 181-186)—are false; they are *misrepresentations*. The world itself (and the ways the world is) are *neither* true *nor* false. Truth and falsity are features of truthbearers, and these are representations. In a world that lacked truthbearers, there would still be ways that the world is, and these have the potential to act as truthmakers at that world should some truthbearers come about, but at such a world, there would be no truth or falsity (2007, p.25). A single truthmaker—some way a world is—can support many and diverse truths; that is to say, truths (accurate representations) and truthmakers are not isomorphic, they do not match up one-to-one. A consequence of this is that we ought not to expect to be able to settle ontological issues by way of enumerating true representations, for it is not the case that for each and every true representation there is some particular and distinct way the world is that makes that representation true (although every true representation requires something to make it true, that same truthmaker may well be shared by a vast number of true representations). To make this mistake is to subscribe to what some call the Picture Theory (Heil (2003, chapter 3)).

(AC2) *The real properties are sparse, not abundant*

Properties and meaningful predicates are not isomorphic, they do not match up one-to-one. That is, for some-thing *x* there may be some meaningful predicates that are true of it, but which do not correspond to any single property that that thing instantiates, and conversely, that thing may instantiate a property which is not picked out by any single meaningful predicate. There are powerful arguments in favour of accepting some sort of sparse theory independent of questions regarding the ontological status of properties (see section 1.4). Martin holds that what real properties there are, and in what ways they 'match up' to the meaningful predicates of natural language, is a matter to be decided empirically (2007, p.66), but one need not agree with this in order to hold a sparse view of properties.

It ought to be obvious that there could be some meaningful, purely dispositional or purely qualitative predicates that are true of some entity or other — and if it is conceded that properties match up one-to-one with meaningful predicates, then a counter-example to the Limit View would be easily produced. (See section 4.3). If one accepts a sparse theory, generating such a counter-example is much more difficult — the opponent would have to show not only that there are meaningful purely dispositional/qualitative predicates that feature in true representations, but that the only possible ontological basis for these would be purely dispositional/qualitative *properties*.

(AC3) *Dispositions are not relations*

This claim does not merely comprise part of Martin's wider metaphysics of dispositionality (for a brief exposition of this see sections 1.4 and 3.5), but is integral to the Limit View—if it is to be maintained that dispositionality and qualitativity can be identified, then it cannot turn out that one of these is relational, whilst the other is not. A disposition is a monadic property, and is not a relation between an object and some as-yet-unrealised manifestation.

(AC4) *Reality is compositional*

Higher-level complex phenomena are composed of smaller, more basic parts. At some point this bottoms out in a fundamental level of what Martin follows Locke in calling "the finest interstices of nature" (for instance (2007, p.78), see also section 1.4 of this thesis). This viewpoint complements (AC2) in helping to us know where to look for the real properties, and thus where best to apply the Limit View. This should not be taken as implying that *only* the properties that are instantiated at the fundamental level are real, but rather that higher-level complex properties, whilst they may also be real, are dependent on their more fundamental components. This dependency is that which a whole owes its parts. (See Martin (2007, chapter 4).)

(AC5) *Quality and disposition are not mutually exclusive*

Despite how they have sometimes been defined, quality and disposition should not be held in contradistinction to one another—that is to say, qualities ought not to be defined as something along the lines of 'all and only those properties that are not dispositions'.. Rather, both 'quality' and 'disposition' should be given their own substantive, and non-mutually exclusive definition. (See Chapter Two). It should be easy to see that considering them to be mutually exclusive would render the Limit View highly implausible (if not incoherent).

6.2 The Limit View

This section enumerates what, given the exploration of it that has occupied this thesis thus far, the Limit View is committed to. These commitments are not argued for or subjected to extended discussion here, where necessary cross-references are provided.

(C1) Qualities are real

There are real properties such that they make a contribution to the qualitative nature of the things that instantiate them—and this is all that is required in order for it to be the case that qualities are real. Such properties provide the truthmakers for statements regarding the qualitative nature of the things in question—that is to say, there are some ways the world is, independently of how it is represented, that make true (or fail to make true) representations regarding the qualitative nature of things within the world. These ways the world is would continue to obtain, even if there were no such representations.

(C2) Dispositions are real

There are real properties such that they make a contribution to the dispositional nature of the things that instantiate them—and this is all that is required in order for it to be the case that dispositions are real. Such properties provide the truthmakers for statements regarding the dispositional nature of the things in question—that is to say, there are some ways the world is, independently of how it is represented, that make true (or fail to make true) representations regarding the dispositional nature of things within the world. These ways the world is would continue to obtain, even if there were no such representations.

(C3) All real properties are both qualities and dispositions

All real properties are such that they contribute both to the qualitative nature and to the dispositional nature of the things that instantiate them—and this is all that is required in order for it to be the case that all real properties are both qualities and dispositions. All real properties are apt to act as truthmakers both for statements regarding the qualitative nature of the things that instantiate them *and* for statements regarding the dispositional nature of the things that instantiate them.

(C4) The quality is identical to the property itself

It is not the case that the property has some part, aspect, feature, etc., that is the quality. Rather, the property in question and that which informs the qualitative nature of the thing that instantiates the property (that is, the quality) are one and the same, they are identical.

Therefore, it is the property itself that informs the qualitative nature of the thing that instantiates it.

(C5) The disposition is identical to the property itself

It is not the case that the property has some part, aspect, feature, etc., that is the disposition. Rather, the property in question and that which informs the dispositional nature of the thing that instantiates the property (that is, the disposition) are one and the same, they are identical. Therefore, it is the property itself that informs the dispositional nature of the thing that instantiates it.

(C6) The quality is identical to the disposition

Given (C4) and (C5), and the transitivity of identity, we must conclude that the quality and disposition are identical. That is to say, that which informs the qualitative nature of the thing (the quality, which given (C4) is just the property itself) is identical to that which informs the dispositional nature of the thing (the disposition, which given (C5) is just the property itself). That is to say, when any-thing instantiates any real property, that property will make a distinctive contribution to *both* the qualitative nature and the dispositional nature of that thing. This is all that is needed for the property to be rightly considered both a quality and a disposition. These are rightly considered identical because there is, ontologically speaking, only the property itself that is making these contributions.

(C7) Property is a unitary phenomena

On this account, one ought not to conclude that properties, as they contribute to both the qualitative and dispositional natures of the things that instantiate them, must be somehow composite entities that consist of some part which is a quality and some part which is a disposition. (See sections 3.4-3.6). To do so would lead to intractable problems for the Limit View (See section 4.1). Rather, the real properties are unitary, simple and basic. They are not composed of further parts, and feature at the most fundamental ontological level alongside the substances that instantiate them.

(C8) 'Quality' and 'Disposition' are not type terms

The terms 'quality' and 'disposition' do not function as type terms which pick out distinct types of properties (in say, the way 'dog' and 'cat' are type terms which pick out distinct types of domesticated mammals). (See section 4.3). If speaking of qualities and dispositions (mis)leads one to think in this way, it may be better to re-couch such talk in terms of 'qualitativity' and 'dispositionality'.

(C9) No real properties are pure qualities

To be a pure quality, a property would have to be in 'pure act' (Martin, (2007, p.39)), always manifesting itself completely, with no potentiality whatsoever. There are no real properties like this. This is not to say that there could not be some true description of a real thing that referred purely to its qualitative nature. Rather, the truthmaker for such a description would be a property (or number of properties) that, whilst they contribute to the qualitative nature of the thing in question, do not *solely* do this. Considering, speaking of, conceiving, treating, etc., a property as a pure quality is to deal with that property in a partial and abstracted manner.

(C10) No real properties are pure dispositions

To be a pure disposition, a property would have to be nothing more than the potentiality for some future manifestation, and not characterise its bearer in any other way (*ibid.*, p.72). There are no real properties like this. This is not to say that there could not be some true description of a real thing that referred purely to its dispositional nature. Rather, the truthmaker for such a description would be a property (or number of properties) that, whilst they contribute to the dispositional nature of the thing in question, do not *solely* do this. Considering, speaking of, conceiving, treating, etc., a property as a pure disposition is to deal with that property in a partial and abstracted manner.

(C11) Qualitativity is not reducible to or eliminable in favour of dispositionality

Despite what many previous accounts have held, there is no prospect for removing qualitativity from our ontology so that we are simply left with dispositionality. (See Chapters Three and Four)

(C12) Dispositionality is not reducible to or eliminable in favour of qualitativity

Despite what many previous accounts have held, there is no prospect for removing dispositionality from our ontology so that we are simply left with qualitativity. (See Chapters Three and Four)

(C13) Qualitativity is not emergent from; supervenient on or caused by (etc.) dispositionality

There is no explanation for the fact that all real properties are qualities that can be given by appeal to the fact that all real properties are dispositions in some more fundamental or foundational way, such that dispositions are held to be ontologically prior to qualities. (See sections 3.5-3.6).

(C14) *Dispositionality is not emergent from; supervenient on or caused by (etc.) qualitativity*

There is no explanation for the fact that all real properties are dispositions that can be given by appeal to the fact that all real properties are qualities in some more fundamental or foundational way, such that qualities are held to be ontologically prior to dispositions. (See sections 3.5-3.6).

6.3 The Surprising Identity Thesis

Qualitativity and dispositionality are real, irreducible, ineliminable features of the world. However, they both find their basis, ontologically speaking, in a single type of entity: properties. These properties are the ways things in the world are. Any such way some-thing is will have consequences for that thing; it will inform both what that thing is like, regardless of how it might behave in possible (but currently non-actual) circumstances (that is, it will confer some *quality* on the thing) and it will determine how it will behave in any one of a vast number of possible (but currently non-actual) circumstances (that is, it will confer some *disposition* on the thing). The property that will be the source of these contributions to the thing in question is unitary, and so these contributions cannot be separated one from the other in reality, that is, we could not get rid of one whilst maintaining the other, for to get rid of one would require us to get rid of the property itself, and so the other would follow. Both the quality and the disposition are identical to the property itself, and so also to each other.

As discussed in Chapter Three of this thesis, it might appear that there is tension between the claim that the distinction between qualities and dispositions is not merely mind-dependent, but that they are nevertheless identical to one another. What the proponent of the Limit View desires to maintain is that whilst the distinction between qualities and dispositions is clearly not what we have called a 'real distinction', that is, a distinction between two things (or thing-like entities), this distinction is not mind-dependent, it has some antecedent foundation in reality, in the way the world actually is prior to any action of the mind. It is therefore incumbent on the proponent of the Limit View to give some kind of account of this foundation.

One response to this tension is to take 'quality' and 'disposition' to denote formal ontological categories to which all properties belong. Just as Gibb has argued that properties can be simple and belong to both the categories of 'Particular' and

'Characteriser' (see Gibb (forthcoming), and sections 5.2 and 5.5 of this thesis), so it can be argued that properties belong also to the categories of 'Quality' and 'Disposition'. Indeed, these would be most plausibly conceived of as subcategories of 'Characteriser'. A schema would look something like:

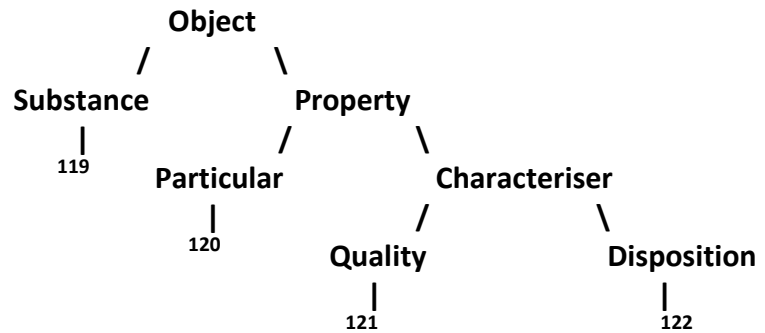


Fig 6.a

In considering such a schema, it is essential that we do not consider each new branch to represent a new kind or type of *thing*. Rather, every divide represents a pair of categories *to which* the entity above belongs. The only level within the hierarchy at which different kinds or types of things (for Martin (1980) propertied-substances) occur is that of Object.¹²³ A taxonomy or schema dividing reality into these kinds or types of things would be of an entirely different nature to the schema outlined above; there are no relations,

¹¹⁹ This branch may continue to many sub-categories, but as the ontology of substance is not the focus of this thesis, I shall leave the matter open.

¹²⁰ This branch may continue to further sub-categories, but as the nature of properties as particulars/universals is not the focus of this thesis, I shall leave the matter open. It should also be noted that whilst this branch is labelled 'Particular', in line with both Gibb and Martin's own commitments, there is nothing in this thesis which requires it to be so—it could equally be 'Universal'—I intend to remain neutral with regards to this controversial debate within the ontology of properties. It is worth mentioning that Martin himself felt that this debate may eventually come down to terminological, rather than substantive, disagreement (for instance, in Crane, ed. (1996, p.72).

¹²¹ This branch may or may not continue to sub-divide; this is a matter on which, for the purposes of this thesis, I remain neutral.

¹²² This branch may or may not continue to sub-divide; this is a matter on which, for the purposes of this thesis, I remain neutral.

¹²³ At the end of Martin (2008), he suggests a preference for an ontology free of objects. However, the sense in which the term is used there is not the technical sense in which I am using it here, to mean propertied-substance (Martin certainly would not have a preference for an ontology without propertied-substance).

correspondences, parities, etc., that one could draw between them. This second sort of taxonomy or schema is, perhaps, the sort which are generated by the natural sciences. Given the above characterisation of the schema in place, the distinction between any of the different categories is not a 'real distinction', that is, a distinction between two different things, as the categories do not pick out things. These distinctions occur only at the top level of the hierarchy. What this schema claims is that all these things *are* propertied substances; and all properties *are* particulars and characterisers; and all characterisers *are* qualities and dispositions.¹²⁴ The direction of priority is, as it were, top-down rather than bottom-up (whereas, according to Martin's compositionism ((2007, chapter 4) and section 1.4 of this thesis), the direction of priority for the other sort of schema, which categorise the different kinds of things, is more likely to be bottom up, with the entities at the ends of the branches being the physical fundamentals, the "finest interstices of nature", whatever they turn out to be).¹²⁵ This then satisfies the requirement that, in line with the surprising identity thesis, the distinction between quality and disposition is not so great as one between thing and thing—that is, it is not a 'real distinction'. It seems to also satisfy the requirement that whatever distinction does exist between quality and disposition, it exists antecedently to any operation of the mind, that it is something more than a mere mental, mind-dependent distinction. The facts of ontological categorisation are fixed prior to how we think about the world. They would obtain even if there were no minds in the world to consider these facts. Thus, this interpretation of the Limit View fulfils the second requirement, that the distinction between quality and disposition is more than 'in-the-eye-of-the-beholder' (see ,for instance, Martin (1996, p.174) or (1997, p.202)). Taking 'quality' and 'disposition' to operate as formal ontological predicates, which pick out categories to which properties, as characterisers, can be said to belong provides a plausible ontological foundation for the claim that, whilst strictly speaking qualities and dispositions are identical (the surprising identity thesis), the distinction we draw between them (which albeit requires some act of precise abstraction) is not merely "in-the-eye-of-the-

¹²⁴ Or perhaps a more precise, but much more clumsy term (and thus one I will not adopt), is 'propertiednesses'. Whilst I continue to use the term 'property' which may be thought to carry thing-like connotation, this is to be resisted. Alongside this is to be borne in mind the now much-repeated warning that although the language may suggest thing-like-ness, ontology is not to be read off language use.

¹²⁵ At least, this is how it seems to me. I do not intend to argue this point, as it has little bearing on this thesis.

beholder", but draws its license from the way the world is prior to any mental operation, that is, has some foundation in reality.

An interpretation of this sort finds support in Martin's general metaphysical framework. In 'Substance Substantiated' (1980), Martin discusses Locke's account of substrata and provides what he sees as a 'refurbishment' that makes such an account appropriate for debates in contemporary metaphysics. He presents a metaphysic whereby *objects* are primary.¹²⁶ Objects are to be understood as "property-bearer -- properties borne" (*ibid.*, p.6). 'Substratum' and 'properties', if considered on their own, as pure property or substance, rather than as partaking in the formation of an object, can only be partial considerations or abstractions:

When we are thinking in the most general possible way of the attribution of properties (*each and every* one) to an object, we are thinking of, or partially considering, the object, perhaps a passionfruit, simply *qua* or simply in its role as, the bearer, not itself borne, of its properties without at the same time considering it in terms of the actual properties it undoubtedly bears.

Partially considering a passionfruit, as *what* bears whatever properties it bears, is thinking of it under a partial, incomplete description -- as a bearer of properties. (*ibid.*, pp. 9-10)

He argues that:

It is, then, an error to think of either the substratum of an object or of the properties of an object as *parts* of an object. They are the non-object things *about* an object. And even the finest parts right down to those objects that are the 'insensible corpuscles' of physics are such that, like the larger, observable wholes they might make up, there is that *about* them that is the bearer of properties, and that *about* them that is the properties borne. (*ibid.*, p.8)

Properties and substrata (that is, substances) are not then to be thought of as things, or even as thing-like entities. They are not the sort of entity that can enter into mereological relations in order to form complex wholes; only things (or for Martin, 'objects') can do this. It should be clear that this position is consistent with the proposed interpretation given above, and fits comfortably into the schema proposed: these "*about*"-nesses are equivalent to formal ontological predicates. It should also be clear to the reader that this line of thought regarding the distinction between substance and property, and their place in the ontological hierarchy, is formally similar to that proposed by Martin for how we ought to understand quality and disposition. As we have already seen, pure qualities and

¹²⁶ Martin's use of 'objects' is roughly equivalent to my use of 'things' throughout this chapter.

dispositions are unrealisable abstractions and partial considerations of properties which are in themselves qualities-cum-dispositions. Any attempt to think of them in terms of parts which make up some complex whole is also to be resisted. That this interpretation of Martin's claims about properties, qualities and dispositions is consistent with, and shows formal similarity to, other claims he makes about fundamental ontology lends it plausibility.

The second line of interpretation which was discussed earlier in this thesis appeals to the Scholastic notion of a distinction of reason, a distinction between entities that is less than a real distinction (which obtain between two different things, say, between the passionfruit I ate yesterday and the one I ate a week earlier, or indeed between either of these and myself, or the chair I sat on to eat them), but greater than a merely mental distinction (which obtain only between those things that are in reality non-distinct, but are held to be distinct by some operation of our minds, such as when we mistakenly consider the selfsame object to be two different objects on two different occasions on which we encounter it). Distinctions of reasons involve *some* operation of the mind in order to render the entities in question distinct; if they did not require this then they would in fact be real distinctions. However, unlike merely mental distinctions, distinctions of reason have some grounding in reality, some foundation in the way things actually are (although this grounding is not, it must be emphasised, a real distinction between the two entities held distinct by the distinction of reason in question). It should not be hard to see how such an account can be appealed to in order to substantiate Martin's claims that whilst property is a strictly unitary phenomena, and qualities and dispositions are in fact surprisingly identical (and so no real distinction obtains between them), nevertheless the distinction between these is more than "in-the-eye-of-the-beholder", that is, more than a merely mental distinction. Distinctions of reason involve acts of precise abstraction (see section 5.4 of this thesis) just as Martin claims that the distinction between quality and disposition is based on abstraction (see sections 3.3-3.5 of this thesis), and it is due to this that some mental activity, the act of abstraction, can be properly attributed to the distinction—and so we cannot consider the distinction a real distinction (which would obtain *regardless* of all mental activity). But in order for an appeal to the distinction of reason to be informative as to why this distinction is not "merely-in-the-eye-of-the-beholder" we need to examine what it is that gives such distinctions their foundation in reality, that is, what it is that makes them more than merely mental distinctions.

Suárez offers the following comments about the foundations in reality of distinctions of reason:

[...]the foundation must be either the eminence of the object which the mind thus distinguishes (with a distinction that many call virtual), or at any rate it must be some reference to other things which are truly distinct in the real order, and with respect to which such a distinction is excogitated or conceived. (Suárez, 2007, p.18)

This disjunction offers two ways in which the distinction of reason can be given a foundation in reality. The first disjunct appeals to the "eminence" (*eminentia* in the original Latin) of the (in reality) unitary object which is, ontologically speaking, identical to both extremes of the entities held to be distinct by reason.

6.4 Eminence

What follows will be a fairly lengthy discussion of eminence. I will ultimately conclude that, insofar as we might wish to apply the distinction of reason to the Limit View of properties, appeals to eminence will not be helpful. However, it is important to see how and why this is the case. We are interested in the foundation in reality that licenses or grounds a distinction of reason, and Suárez identifies eminence as one possible foundation. Thus, it would be remiss to fail to explore this notion, even if, in the end, it is concluded that it is not helpful to the current inquiry—eminence is not an easy concept to pin down. Whilst Suárez employs the term repeatedly throughout the *Metaphysical Disputations*, he offers little explanation of its meaning. To my knowledge, the most extended piece of discussion directed towards this concept within the *Metaphysical Disputations* is to be found in disputation 30. Suárez here refers to a discussion of whether God contains all created perfections in the *Summa Theologica*, where the claim is made that perfections can be had in one of two ways:

[...]either in the same formality, if it is a univocal agent--as when man reproduces man; or in a more eminent degree, if it is an equivocal agent--thus in the sun is the likeness of whatever is generated by the sun's power. (Aquinas, 1911-1925, I q.4 art. 2)

Aquinas goes on to conclude:

Since therefore God is the first effective cause of things, the perfections of all things must pre-exist in God in a more eminent way. (*ibid.*)

To contain formally is to contain in a literal sense:

(FC) if O contains x formally, then O actually has x.

God does not contain the perfections of created beings in this literal sense, but rather 'eminently'. However, it is not clear from Aquinas' discussion what such containment

consists in, other than the indication that "likeness" is involved. These two quotations also illustrate a possible ambiguity in the concept—the first seems to suggest that when something contains a perfection eminently, it does not contain that perfection literally, but rather contains a likeness of that perfection. Thus, eminent containment is the having of some *other* perfection than the one in question, this other perfection being relevantly related (by 'likeness') to the perfection under examination. That is to say:

(EC1) if O contains *x* eminently, then O contains *y*, and *y* is a likeness of *x*.¹²⁷

Suárez elaborates on the concept of eminent containment as below:

To put it briefly, we may say that to contain something eminently is to possess such a perfection in a superior manner, which contains in virtual form whatever is to be found in the lower perfection. (Suárez, F in Arieu et al, p.34).

This passage and the second quotation from Aquinas above, seem to imply, contra (EC1), that eminent containment *does* involve the very same perfection, but contained in some relevantly different manner. We could render this reading of the concept of eminent containment as:

(EC2) if O contains *x* eminently, then O contains^{em} *x*.

It is worth noting that (EC1) and (EC2) are not exclusory of each other, although for reasons which will be discussed below, I do not think anything is to be gained from their synthesis. In the name of thoroughness, we could render a synthesis of these two readings of Suárez's and Aquinas' descriptions of eminent containment as:

(EC3) if O contains *x* eminently then O contains^{em} *y* and *y* is a likeness of *x*.

The ambiguity noted above is also picked up on in both Robinet (2001) and Gorham (2003). Robinet associates the view that eminent containment involves one item differently contained with Suárez (p.11) and that of it involving one mode of containment and two

¹²⁷ It might be worth noting at this juncture that, of course, one way of being a likeness of something is to be that very thing, although if this is the case for Aquinas, then it is hard to see how this comment is helpful to those of us trying to understand the nature of eminent containment as distinct from that of formal containment.

items differently contained with Gregory of Valencia (pp. 14-15).¹²⁸ Gorham discusses Descartes' use of eminent containment.¹²⁹ He distinguishes between a realist:¹³⁰

[...]if [O] contains [x] eminently then [O] contains [x] and [x] is not identical to some property [y] that [O] contains formally. (Gorham, 2003, p.6)

and reductionist:

[...]to say that a given perfection [x] exists eminently in a substance [O] is to say simply that [O] formally contains certain other perfections [y]. (*ibid.*)

analysis of the concept. These can be presented, as realist and reductionist respectively, as below:

(EC4) if O contains x eminently, then O contains x and x is not identical to some property y which O contains formally;

(EC5) if O contains x eminently, then O formally contains y, and $x \neq y$.

Stevens (1978) and Norton (1978) engage in a debate over the correct way to interpret Descartes' use of the concept of eminent containment. They focus on what I shall call the 'excellence criteria': the claim that central to any interpretation of eminent containment is the claim that to contain eminently involves containing something more 'excellent' than whatever is contained formally.¹³¹ Neither Stevens nor Norton offer any explanation or definition of the term; they adopt it as a straight translation from the French "excellentes" (Descartes, 1673, p.33). Briefly put, it seems that the term is not being employed in the manner of a value judgement (such as when one might say "That was an

¹²⁸ I shall examine both approaches as a potential manner of interpreting the concept. For the purposes of this thesis I am more concerned with the question of how *any* viable interpretation might bear on the question at hand than I am with historical scholarship of Suárez's work.

¹²⁹ There is very little critical material regarding eminence, despite the concept appearing in the work of such significant figures as Aquinas, Descartes, Leibniz and Suárez. What material there is tends to focus on Descartes' use, and so I discuss some of that material here, whilst making every attempt to avoid anachronistically imposing a conception of eminence on Suárez which post-dates him. Suárez is identified as the principal source for Descartes' employment of the concept (see Ariew *et al*, eds., (1998); Ariew *et al*, eds., (2003 p.238); Gorham (2003, p.4 and p.15)), and so we can reasonably expect an illumination of Descartes' work to also shed some light on Suárez's.

¹³⁰ In the formulations that follow I have standardised the notation used for clarity's sake. I have substituted a letter used to represent that which eminently contains some perfection/property/quality in the original author's text with O, P, etc. and letters used to represent these qualities with x, y, etc. Where this has been done it is indicated via means of square brackets around the letter in question.

¹³¹ This thought might be seen to be echoed in Suárez's claim that eminent containment is "superior" (2011, p.8).

excellent adventure"), rather, it relates to completeness or wholeness, much as the terms 'perfection' and 'greatness' often do in works from the medieval and early modern period. Both Stevens and Norton assume a reductionist interpretation of eminence, which Stevens gives as:¹³²

[O] contains eminently the quality [x] if and only if there is something [y] such that [y] is different from, and more excellent than, [x], and [O] has [y]. (Stevens, 1978, p.338)

In his response to Stevens' paper, Norton argues that this should have been:

[O] contains eminently what is in [P] if and only if [O] contains other things at least as excellent as [P], or [O] contains other things more excellent than the things contained in [P]. (Norton, 1978, p.339)

Norton's correction is that eminent containment, for Descartes at least, need not be containment of some superior distinct perfection; it could be simply something of equal excellence. I find Norton's claim persuasive, and will adopt it in what follows; however, should one prefer Steven's stricter condition, it does not seem to me that anything said below really turns on this, and so the reader is quite welcome to ignore the 'at least as' clause. Reconstructing Gorham's reductionist account taking into account the 'excellence criterion' gives us:

(EC6) if O contains x eminently, then O formally contains y, and $x \neq y$, and y is either at least as excellent as, or more excellent than, x;

whereas the realist account should be read as:

(EC7) if O contains x eminently, then O contains x and x is not identical to some property y which O contains formally, and the manner in which O contains x is at least as excellent, or more excellent, than the manner in which O contains some property y which O contains formally.

Once again, in the name of thoroughness, the synthesis of these would be:

(EC8) O contains x eminently if O contains y, and $x \neq y$, and y is either at least as excellent as, or more excellent than, x and the manner in which O contains y is at

¹³² Most likely due to the fact that such a reading is the one suggested by the French quotation on which they both focus: "Par exemple, la pierre qui n'a point encore est, non seulement ne peut pas maintenant commencer d'estre, si elle n'est produite par une chose qui possede en soy formellement, ou eminemment, tout ce qui entre en la composition de la pierre, c'est-à-dire qui contienne en soy les mesmes choses ou d'autres plus excellentes que celles qui sont dans la pierre[...]" (Descartes, 1673, p.33).

least as excellent, or more excellent, than the manner in which O contains some property z which O contains formally.¹³³

We find ourselves with three potential accounts of what it means for some object to contain something eminently: a reductionist account (EC6) (reductionist in the sense that it reduces the notion of 'eminent containment' to that of 'formal containment'); a realist account (EC7) (realist in the sense that it reifies 'eminent containment' as some kind or form of containment distinct from 'formal containment') and a synthetic account (EC8) which preserves both the realist thought that eminent containment is distinct from formal containment and the notion that that which is eminently contained must be more excellent than something formally contained found in the reductionist account.

We should now be in a position to examine whether or not any one of these analyses can be helpfully employed in our interpretation of Suárez's remark that the foundation of a distinction of reason might be "the eminence of the object" (Suárez, 2007, p.18), and whether in particular such an interpretation can be employed in our understanding of Martin's claims about the ontology of properties. Before we proceed, the question of how we are to interpret the term 'contains' needs some attention.¹³⁴ The driving forces behind the analyses given above have been the scholarly efforts of Gorham (2003), Stevens (1978), Norton (1978) and Robinet (2001). They were all addressing Descartes' use of the term, which, like Aquinas' (see above), is primarily focussed on issues of causation. In this context, it seems harmless to interpret 'contains' as 'instantiates' where the entities being contained are properties; indeed, this seems the most natural manner of parsing the term in the vocabulary of contemporary metaphysics. If this is the interpretation of 'contains' at work, this seems to speak against a realist or synthetic analysis. Both of these analyses hold that there are at least two distinct kinds of containment, and so if 'contains' is to be understood as 'instantiates', then they hold there to be at least two distinct kinds of instantiation. On such an account, properties can be

¹³³ We might also want to append a 'likeness' criterion (as per Aquinas) to (EC6) and (EC8) which would read 'and y is a likeness of x'. However I find the term 'likeness' in this context horribly obscure, and so in the name of not multiplying formulations any more than I feel I must, have omitted to fully specify these as separate formulations. It ought to be clear why such an addition cannot be made to (EC7).

¹³⁴ The term 'contains' is that used by Stevens, Norton and Gorham, and so I have adopted it here. Thus far, I have taken the term to be non-technical and so it stands in need of some analysis if we are to hope to find the schema above of any use in providing some illumination of the nature of 'eminence'.

instantiated in at least two different ways: eminently and formally. It seems to me that there are a number of reasons that stand against such a view. First, it goes against common usage; I am not aware of any major metaphysical system that treats the term ‘instantiates’ (or a correlative of that term) as equivocal. Secondly, I find the claim that there are distinct forms of instantiation (probably irredeemably) obscure; it is hard to see just what such a claim means. Thirdly, to take there to be distinguishable kinds of instantiation requires us to understand instantiation as having some content which can vary. It would be by virtue of differences amongst these contents that the different kinds of instantiation could be distinguished one from another. However, generally speaking (and certainly within Martin’s metaphysic, the material to which we hope we might usefully apply these concepts), ‘content’ is given *by properties instantiated*, and so instantiation itself just does not seem the right sort of thing to be content-ful.

Moreover, it does not seem that interpreting ‘contains’ as ‘instantiates’ is appropriate to the project at hand. For if we do take this line of interpretation—and hope that this can be employed in illuminating Martin’s remarks that whilst there is no ontological division between quality and disposition—the distinction is nevertheless greater than one merely ‘in-the-eye-of-the-beholder’, then we seem to be making the foundation for this claim a matter of instantiating some property: a second order property, or property of a property. To analyse Martin’s claims about properties in terms of the Suárezian distinction of reason, and this in terms of eminence, and eminence in a realist manner treating ‘contains’ as ‘instantiates’, would give an analysis along the lines of:

[From (EC7)] if a property contains dispositionality and qualitativity eminently, then that property instantiates^{em} d and q , and neither d nor q is identical to some property y which that property (formally) instantiates^{fo}, and instantiating^{em} is at least as excellent, or more excellent, than instantiating^{fo} ¹³⁵

Such an analysis treats both dispositionality and qualitativity as founded on further properties of the first-order property in question, albeit properties had eminently as opposed to formally—second-order properties d and q which provide the basis for the claim that dispositionality and qualitativity are contained eminently in the property, as

¹³⁵ This analysis is rooted in the realist account (EC7). As noted above, the synthetic account (EC8) preserves the realist notion of different kinds of containment. I shall not provide an equivalent translation of (EC8), it should be clear to the reader how such a translation would look—and more importantly, if (EC7) and its derivatives are found lacking by dint of their realist commitment, then (EC8) fails on the same grounds, and so need not be examined separately at this juncture.

opposed to formally. But what of *d* and *q* themselves? Martin's claims are intended to range over *all* real properties. This given, both *d* and *q* will instantiate some further third-order properties to provide the foundation for their dispositionality and qualitativity, which will require further properties... etc. The generation of this regress is unattractive. Not only does it generate an (at the very least) unattractive regress, but more seriously it seems to rob properties of their proper place as *ways that things are*. Their 'way-hood', on such an interpretation, is always deferred to some higher-order pair of properties. Whilst such deference may be quite acceptable in certain formal settings (c.f. Tarski's (1983) T-schema), I consider it to be much less at home in ontology. It seems that an account which must appeal to second-order properties in order to provide a grounding for Martin's claims is unlikely to bear much fruit. The interpretation of 'contains' given above along with the analysis given by (EC7) might work well in the causal context, but cannot be applied to the case in hand.¹³⁶

Indeed, there is no immediately evident parsing of 'contains' that seems to fit well with the case at hand—where we are to consider any real property as eminently containing the two extremes of a distinction of reason, qualitativity and dispositionality. If we accept, as may be the case, that no plausible interpretation of 'contains' can be given to fit the case at hand, then we might conclude that Suárez's first manner of grounding distinctions of reason ("the eminence of the object" (2007, p.18)) cannot be appealed to in any interpretation of Martin's claims about the surprising identity of the qualitative and the dispositional. If we do so conclude, then we must move on to the second option he offers, "some reference to other things which are truly distinct in the real order, and with respect to which such a distinction is excogitated or conceived" (*ibid.*). However, we might conclude that an interpretation of 'eminence' in terms of 'eminent containment' is a blind alley, and some other interpretation can be given that fits our current project better. Such a conclusion, whilst obviously possible, however, finds no support in the critical literature on the subject.¹³⁷ If indeed another line of interpretation is forthcoming (and I suspect, but no more than suspect, that it may well be so in the context of Suárez's full body of work, especially given his frequent use of the term in diverse contexts), establishing the particulars of this interpretation would require a sustained and developed piece of scholarship in its own right, and I lack both the space and the resources to conduct such a

¹³⁶ Whether it in fact does, or does not, is no concern of this thesis.

¹³⁷ Or at least none that I have been able to discover.

study within this thesis.¹³⁸ Such a conclusion would, therefore, also compel us, albeit for more pragmatic reasons, to pass over the notion of 'eminence' in our attempts to illuminate Martin's claims via Suárez's distinction of reason, and proceed to an examination of the second manner in which Suárez suggests such distinctions may be grounded. A third option would be to claim that we need not give an explicit interpretation of 'contains'. This would allow us to apply the analyses above to Martin's position, bearing in mind the restrictions that refraining from giving some *précising* analysis of 'contains' puts into place. Chief amongst these is that if we take 'contains' as unanalysed, then it hardly seems we can take there to be two distinct concepts of 'contains' at work between formal and eminent containment. This is because we cannot offer any account of the manner in which they might differ. Both the realist and synthetic accounts of eminent containment hold there to be just such a distinction. Therefore, if we are to refrain from offering an analysis of 'contains', it seems that we must reject the realist (EC7) and synthetic (EC8) accounts of eminent containment. Thus, as with an interpretation of 'contains' as 'instantiates', the reductionist (EC6) analysis stands as the sole live option.

Where does this leave us? We had hoped to understand a certain claim (Martin's) by appeal to a notion (Suárez's Distinction of Reason) which we found itself in need of further analysis (via 'eminence') and that that analysis itself called for explication. Having examined a number of ways of understanding 'eminence', the best option seems to be the reductionist interpretation of eminent containment, which I have expressed in terms of (EC6) above. The situation could be summarised as below:

[Martin's claim] Whilst property is a unitary phenomena, qualitativity and dispositionality are distinct in a manner that is more than merely in-the-eye-of-the-beholder;

[My hypothesis] This claim can be interpreted via Suárez's distinction of reason;

[From Suárez] This distinction of reason finds its foundation in the 'eminence' of the property;

[Argued above] Eminence is (as far as it can be examined here) eminent containment;

[Argued above] Eminent containment is best analysed as (EC6);

¹³⁸ Nor would it be becoming for me to merely speculate as to the form and content of such an interpretation in the absence of the requisite scholarly work.

[Therefore] Martin's claim can be analysed as (EC6):

[Which gives us] a property contains *qualitativity/dispositionality* eminently if that property formally contains something *y*, and the *qualitativity/dispositionality* in question $\neq y$, and *y* is either at least as excellent as, or more excellent than, the *qualitativity/dispositionality* in question.

There are several reasons why this analysis seems to fall far short of providing what is being looked for in this section: a clear ontological basis for Martin's claim. First, if we refrain from offering further analysis of the term 'contains', then it seems obscure in the context at hand. It is not clear what could it mean for a property to 'contain' some further entity. Nor can I see how, even if it could, this would in some satisfactory sense provide a foundation for that property's being both dispositional and qualitative. Secondly, we are also left with the question of just what '*y*' might be—and no helpful answer is immediately forthcoming.¹³⁹ If the account does no more than appeal to some *ad hoc* entity to provide a foundation for the distinction, then it is unsatisfying indeed. Thirdly, the concept of 'excellence' in question may also require further specification. Finally, it is not clear how something's merely being more excellent makes it fit to play this foundational role for the distinction—surely the 'more excellent' thing ought also to be somehow relevantly related to the extremes of the distinction in question (what I have called Aquinas' 'likeness criterion may have been aiming at this). Given these considerations, it does not appear that there is any particular hope of illuminating Martin's claim with recourse to the distinction of reason, if this is understood to find its foundation in eminence. Thankfully, Suárez gives us a second option for how we might understand the distinction of reason, and it is to this we now turn.

¹³⁹ It occurs to me that we might take '*y*' to be that property's dispositionality when enquiring as to how quality is eminently contained in the property, and to be that property's quality when enquiring as to how dispositionality is contained. Such a move would bring Martin's position and the interpretation discussed above into line with one another. However, it seems to me that to take this move renders this interpretation no more than a re-statement of the Limit View with the additional vocabulary of eminent containment (which, as noted, is itself not un-problematic), and as such can shed little light on the topic at hand.

6.5 Another Option

The second disjunct of Suárez's quotation appeals to:

[...]some reference to other things which are truly distinct in the real order, and with respect to which such a distinction is excogitated or conceived. (Suárez, 2007, p.18)

When a distinction of reason is founded in this manner, although the two entities which are held distinct by a distinction of reason are in reality a single entity, the holding distinct of them is via an appeal to some other real distinction. Where should we look for this distinction which it is claimed is referenced in the drawing of a distinction of reason? The answer given by Suárez is in the concepts involved in the two extremes: the concepts of 'quality' and 'disposition' are clearly distinct as if they were not, there would be nothing *surprising* about their identity. What is key is that whilst the "objective concepts" are clearly distinct, they are *inseparable* in the object (the property) itself:

[...]whenever it is quite clear that any two extremes, which are united and conjoined in a thing, are distinct in their objective concepts in such a way that in the concrete individual they are absolutely inseparable... we have a sound and practically certain argument that they are not actually distinct in the object, but are distinct with a distinction of the reasoned reason[...] Thus Peter, man, animal and other like predicates, as they really are in Peter, are not distinct in objective fact. (Suárez, 2007, p.60)

'Quality' and 'disposition' can be taken in this manner—distinct concepts, which both truly (although partially) represent a unitary, undifferentiated entity (a property), which are inseparable in reality and so are not "distinct in objective fact" but neither are they merely mental distinctions.¹⁴⁰ Again we can note a formal similarity between general arguments Martin applies to questions of fundamental ontology and Suárez's treatment of the difference between real distinctions and distinctions of reason (in the former separation is possible, in the latter it is not). This similarity ought to lend credence to an interpretation of Martin's work which makes recourse to the metaphysical distinctions discussed by Suárez. Furthermore, it must be noted that this second line of interpretation is not at odds with the first given—indeed, the two lines of interpretation can be seen as complementing one another. Suárez's example appeals to just the sort of categorial hierarchy—Peter, man, animal—as has been discussed above. However, we are not forced to accept both together;

¹⁴⁰ It is not my intention here to argue that 'quality' and 'disposition' *are* such concepts. Martin gives his arguments for the inadequacy of pure qualitativity and pure dispositionality as concepts which exhaustively characterise properties (see Chapter Three). Rather, my concern here is to present a model under which this claim can be consistently and intelligibly maintained.

one could adopt the first approach without appealing to the second, and vice versa. I take this flexibility to be a virtue of the two lines of interpretation laid out. As this thesis continues, I will assume an interpretation of the surprising identity thesis which takes these two lines of interpretation as complementary; however, if in treating the applications in chapters x and y the adoption of just one or the other would make a substantive difference as to how the Limit View is applied, this will be noted in the text and these differences explored. As discussed in sections 5.4-5.5, the distinction between concepts which is appealed to in this account can either be conceived of as a positive real distinction (an actual distinction between two things or thing-like entities)¹⁴¹ or as a negative real distinction (*ibid.*, p.17): these obtain between two entities which are actually separable and distinct, but are neither things nor thing-like entities, and so cannot be distinct by a positive real distinction. However, if these were things or thing-like entities, the distinction between them would be a positive real distinction, and so they are to still be considered really distinct. Which account of the distinction between the concepts of 'quality' and 'disposition' we adopt will be determined by the metaphysics we adopt for concepts. I would call any metaphysics which took concepts to be either things or thing-like entities a realist conception of concepts—and under such an account the distinction would clearly be a positive one. Other accounts would make appeal to the negative distinction, which appears to sit more comfortably with Martin's general metaphysics, where the only 'things' are his objects, the propertied substances ((1980) and (2008, chapter 16)). Whether we take concepts to be distinct by a positive or negative real distinction, however, seems to have little bearing on the utility of this interpretation of the Limit View and its application to other areas of inquiry within philosophy. This given, we need not conclusively resolve the question here.

The Limit View, and especially the surprising identity thesis (which, as was seen in Chapter Four, is the only plausible way to maintain that properties are qualities-cum-dispositions and dispositions-cum-qualities), have been challenged with obscurity and unintelligibility (see Armstrong (2005); Lowe (2006, p.134) and section 4.4 of this thesis).

¹⁴¹ By 'thing-like entity' I mean any entity which, in the metaphysical account in question, is, whilst not considered to be a thing (by whatever standard thing-ness is judged in that metaphysic), is considered to have some relevant similarity to things within that account. The standards for thing-like-ness may well vary between accounts, just as the standards for thing-ness do. Many accounts may not have any thing-like entities, indeed, perhaps none do. Even if this is the case, this fact will not have any significant impact on what is discussed above, references to thing-like-ness can simply be ignored.

Even without having to face an explicit challenge such as this, given that the Limit View flies so starkly in the face of the conventions of the established debate regarding qualities and dispositions (see Chapters One and Two), proponents of this position must offer a clear and thorough account of what the claims of the Limit View amount to, and how they can be consistently interpreted. In the above I have laid out the commitments of the Limit View, and offered what I hope is a clear, detailed and intelligible interpretation of the most difficult of its claims: the surprising identity thesis. Through appeal to the resources of categorial ontology and/or the nuanced and subtle sorts of metaphysical distinction which were discussed by Scholastic philosophers we can come to understand what is meant by the claim that qualities and dispositions are in reality identical to one another (that is, both identical to a single property) and yet the distinction between them is more than merely in-the-eye-of-the-beholder. This is an important result for anyone interested in the Limit View, for nowhere in Martin is there any discussion of the tension between these claims, or account of how it could be that the dispositional and qualitative are identical, and yet distinct from one another in a more-than-merely-mental fashion. Furthermore, coming to such an understanding should help to alleviate the worry generated by the most serious criticism which the view faces: that the identity thesis is obscure and unintelligible; and also to demonstrate that, *pace* Molnar, the Limit View is not anti-realist (see section 4.3 of this thesis). Whilst much has been said in favour of the identity thesis by both Martin (see Chapter Three) and Heil (see for instance 2003 and 2012), a detailed response to the obscurity charge has been lacking. I hope that what has been argued so far in this thesis remedies that situation.

In what follows, I shall be examining how the interpretation of the Limit View advanced in the first half of this thesis can be applied to the debate concerning the ontology of mind and body. I shall address both the Argument from Conceivability (also known as the Zombie Argument) and the Knowledge Argument, and go on to argue that if one adopts the Limit View, as advanced here, then the correct position one ought to adopt concerning the ontology of mind and body is a variant of neutral monism.

Chapter Seven: Martin and the Metaphysics of Mind

Over the course of this thesis so far I have outlined the debate over whether all real properties of objects are fundamentally purely qualitative, purely dispositional, whether some are one and some are the other or whether they are neither. This latter position—that all real properties are both qualitative and dispositional, and therefore are neither *purely*—which originated with C. B. Martin and was later developed by John Heil, has been the focus of this thesis.¹⁴² I have provided a detailed exploration of the conceptual development of this position, arguing that several distinct versions can plausibly be extracted from the body of Martin's work. Due to this, critical investigation of this position needs to begin with an act of interpretation. Such interpretation is a significant part of this thesis, and is conducted in Chapter Four–Chapter Six, starting with an examination of the criticisms that have been levelled at Martin's position and a defence of the position from these criticisms. This is followed by an exploration of the 'surprising identity' thesis, focussing upon how this thesis can be plausibly maintained alongside Martin's claim that the distinction between quality and disposition is more than 'in-the-eye-of-the-beholder' (see for instance 1996, p.174 or 1997, p.202). I have argued that there are at least two plausible strategies for maintaining these claims: one drawing on the resources of categorial ontology and the other drawing on a nuanced account of the metaphysics of identity and distinctness which relies heavily on the works of Francisco Suárez. The question of whether anything significant turns on which of these strategies one chooses remains open; although in the course of the discussion that follows I shall flag up any areas where there may be a substantive choice to be made. I do not intend to argue in favour of one over the other, and, as outlined in section 5.5 contend that, for the most part at least, the two converge.

The remainder of this thesis will examine the application of this account of properties to some questions in the philosophy of mind. There are several reasons for such a move. First, I am sympathetic to the view put forward by Martin that "[a] sensible ontology equips us to tackle problems in the philosophy of mind[...] that have long eluded solution" (2008, p.xv). Secondly, it would seem to count against Martin's position if it were

¹⁴² The position has recently come into more favour than it previously enjoyed, and also finds support from, for instance, Jacobs (2011); Schroer (2010) and Engelhard (2010). Strawson (2008) has argued for a similar position, although his reasoning differs from that of both Martin and Heil. For a critique of Strawson's paper see David Oderberg (2009).

to fail by his own test for sensible-ness just outlined, and, so, perhaps by extension a failing of my interpretation of his position if it cannot be demonstrated to bear fruit in discussions about problems in the philosophy of mind. Thirdly, questions which arise in the philosophy of mind which focus on what has been called the 'hard problem' of consciousness, or the problem of experience (see for instance David Chalmers, 2010, chapter 1), are amongst the most mysterious questions that philosophy faces. As such, it is greatly to the credit of a theory if it can make some headway on such questions. Whilst I consider the interpretation of the Martin/Heil account of properties put forward in this thesis to have the potential to be usefully applied to a variety of philosophical problems, restrictions of space mean that I can only meaningfully engage with one or two applications in what remains of this thesis.¹⁴³ Given this, considerations such as those outlined above have led me to focus on applying the ontology of properties put forward so far in this thesis to current debates in the philosophy of mind.

The application of an account of properties that claims all real properties are both qualities and dispositions to questions regarding consciousness and the ontology of the mind is not unique to this thesis, indeed Martin discusses such things in *The Mind in Nature* (2008). Whilst a significant portion of this thesis has been to a greater or lesser extent dedicated to Martin scholarship, this is not the purpose of what follows. Whilst I will briefly discuss what Martin has to say about the mind at the start of this chapter, I take the position I develop to be largely independent of the one he puts forward. It is my intention to show how a critical interpretation of Martin's account of the ontology of properties can be best applied to issues in the philosophy of mind, rather than to dwell on how plausible and defensible his own positive theorising about the mind and about consciousness is. Heil (2003) also discusses such an application of the thesis that properties are both qualities and dispositions, and Schroer (2010) discusses its relevance to the conceivability argument in. Some of what I have to say in what follows is in line with arguments they put forward, and some of it draws on their work. However, the response I give to the Argument from Conceivability goes beyond both Heil's and Schroer's, and is, I believe, more powerful.

In what follows I argue that accepting the account of properties put forward in this thesis allows one to develop a monistic ontology which faces up to the hard problem of consciousness. In doing so, I begin by addressing prominent arguments for property dualism. I look first at the Argument from Conceivability, then the Knowledge Argument. I

¹⁴³ In the conclusion of this thesis I outline some of the areas of application which there is not space to discuss in the main body.

go on to briefly discuss how someone who adopted the account of properties put forward in this thesis can respond to general worries generated by appeal to the so-called 'explanatory gap'. The responses which can be given to these arguments will outline the shape of the approach to consciousness open to the proponent of the account of properties put forward in this thesis. In beginning to develop this approach I intend to show that it has the potential to meet the requirements that a theory of consciousness needs to live up to at least as well as any contending position. Furthermore, I delineate some areas where it may have a substantial advantage. It is worth stressing a dialectical point at this juncture—I do not take the viability of the Martin/Heil account of properties to turn on its success or failure in this area, as the position finds independent a priori motivation in the arguments discussed in Chapter Three of this thesis. Rather, the (already motivated) position can be thought to gain some appeal given the progress it can help us to make in this area.

Given the limited space left in this thesis, what is to follow will, of necessity, be much less than a fully developed theory of consciousness. Such an endeavour would require more time and space than I have had available over the course of researching and writing this thesis. However, what I hope to offer by the end is a sufficiently detailed sketch of how the development of such a theory might proceed that it is clear to the reader how adopting the account of properties put forward in this thesis might allow one to make headway in the philosophical task of understanding conscious experience and how it relates to the physical world. Once I have outlined this approach, I go on to locate it in the conceptual space of the current debates regarding consciousness and the mind-body relation. The position, I argue, cannot be easily assimilated to any of the currently popular positions. Rather, it is best interpreted as a variant of neutral monism, which, whilst it was popular in the late nineteenth and early twentieth century, seems to have long fallen out of favour.

7.1 Martin's Account of Mind

The final sixty or so pages of Martin (2008) are by-and-large dedicated to setting out his account of mentality and of how mental entities relate to non-mental ones, set within the context of the ontology he has laid out earlier in the book. I hope that what follows is an accurate and intelligible summary of the contents of those chapters, despite being, of necessity, far less detailed than what can be found there. The summary that follows does

not mirror the exact structure of Martin's discussion, offering a paraphrase of each chapter. Rather, I have tried to collate and present together ideas and arguments from that discussion, focussing on those that relate most closely to issues discussed in this thesis. Inevitably, this process requires selectiveness and interpretation. Should the reader be interested in the definitive version of Martin's position regarding the mind, I urge them to engage with the relevant chapters themselves. There is much in this section that I shall not provide arguments in favour of, nor shall I draw out potential objections to and responses defending these claims, rather the aim is to give an outline of the account of mentality that Martin puts forward. I shall concentrate primarily on what Martin's account has to say about the ontology of mind and body; in particular on what can be said regarding the basis for distinguishing between the mental and the non-mental, and whether in order to uphold this distinction we must appeal to distinct kinds of entity at the fundamental ontological level. There are other topics to which Martin devotes significant attention in the later chapters of (2008) which do not directly bear on this question, and these will receive comparatively little attention here.¹⁴⁴

Rather than frame his discussion in terms of substances or properties, leading to the question of whether an adequate account of mental phenomena requires us to posit an ontologically distinct type of entity over and above the physical, Martin addresses mentality primarily in terms of *systems*. Systems, unlike substances and properties, are not fundamental ontological categories. As such, it makes little sense to raise the question of whether an adequate account of mental phenomena requires positing an ontologically distinct kind of system, rather, it is better considered in terms of whether there are distinctive, unique *features* of mental systems which: (i) are never found in non-mental systems and (ii) require us to posit an ontologically distinct type of entity in order to offer a proper explanation of these features. Amongst the features of mental systems which Martin identifies are included: beliefs and desires; perception; intentionality; consciousness and control. One aspect of Martin's general strategy in approaching each of these features is to show that a proper account of them does not require us to admit a novel type of entity into any of our fundamental categories, whilst noting that there are certain features which are exclusively possessed by mental systems. Therefore, Martin's account sits firmly

¹⁴⁴ For instance, his defence of sensori-motor perception as a genuine modality of perception (Chapter 13), his discussion of the specific role of imagery in language use (Chapter 14) and the details of his account of various kinds of use mental systems engage in and how they relate to epistemological questions (towards the end of Chapter 15). These topics are interesting and Martin's discussion of them deserving of attention, but there is not space to undertake that task here.

in the monist camp with regard to the ontology of mind and body, whilst respecting the idea that there is *some* noteworthy distinction between the mental and the non-mental.

What I am calling 'control' is one feature that Martin discusses which might be thought to be a good candidate for a paradigmatic capacity of uniquely mental systems. A system could be considered to have the capacity (or, more likely, group of capacities) for control when it exhibits at least the following features: receptiveness to inputs, that is to say, the system is such that it can be said to receive inputs in some sense or another from whatever is outside of the system; reactivity to inputs, that is to say, the system may change on the basis of such input; generation of outputs, that is to say, the system can make changes to whatever is outside of it; selectiveness regarding outputs, that is to say, the system is such that it is capable of generating a variety of outputs but will, on the basis of factors internal to the system, on a given occasion generate a particular output *rather than* some other output which it is also capable of generating; adjustability of outputs, that is to say, that the system can continue or discontinue outputs it is generating in light of inputs it receives through feedback and feed-forward, and integration, that is to say, the generation and adjustment of outputs can be directed on the basis of goings on in other, integrated systems. It seems clear that conscious mental systems meet these requirements: we receive information from the external world, these inputs effect us, we react to them and generate behaviour on the basis of these, to which we can make adjustments. Might control then be the, or one of the, hallmarks of mental systems that distinguish them from non-mental ones? Martin holds that this is not the case. For instance, non-mental systems such as the hypothalamus exhibit all the features just enumerated (I shall not repeat his discussion of this here, see (*ibid.*, pp. 136-138) for Martin's account of how the hypothalamus lives up to the standard set for control). Importantly, it is noted, non-mental systems that exhibit control can continue to operate fully functionally in the absence of conscious, mental systems. In evidence of this, Martin cites the case of a patient who remained unconscious but with a fully functioning hypothalamus (and other such systems) for seven years without the intervention or aid of any life-support machine (*ibid.*). If Martin is correct in his analysis, then perhaps exhibiting control is necessary for a system to count as mental, but it is not sufficient.

Another feature of mental systems which might be thought to distinguish them from non-mental ones is the having of beliefs and desires. It is fairly widely accepted that conscious human beings (and maybe some animals) engage in believing and desiring, but

even very sophisticated and complex physical systems such as the hypothalamus do not.¹⁴⁵ In his account of believing and desiring, Martin emphasises their dispositional nature. The truthmaker for a claim such as 'A believes that x' should not be considered to be some item-like entity, which might bear the name 'the-belief-that-x', which is to be found residing within the mind of A. Beliefs (and desires, and other states that Martin identifies as of a similar kind, such as "thoughts, hopes and fears"—(2008, p.180)) are not the sort of thing that would show up on an inventory of A's mind, like pieces of mental furniture. Rather, the truthmakers for true ascriptions of beliefs, desires, etc., "[...]are best understood as dispositional state arrays whose nature is to be explained in terms of what such arrays are dispositions *for* [...]" (*ibid.*, p.179). These states are "deep and intermingling", there are layers upon layers of such states, and numerous interrelations exist between them (*ibid.*, p.180).

First, we ought to note that on this analysis, beliefs etc. are not simple, fundamental properties, rather they are complexes of such properties; or, at least, this is what I take Martin to be advocating in calling them 'arrays'. In considering this analysis, we should remember the rich account of dispositionality that Martin advances. Such arrays of dispositions will be directive for, selective for and prohibitive against an enormous variety of potential mutual manifestations in concert with a vast collection of reciprocal disposition partners. Included within the set of reciprocal disposition partners for any given belief-state will be other states of the system to which that belief is ascribed (including but probably not limited to other beliefs and similar states of the system alongside a variety of non-belief-like states of the system) as well as external environmental factors. A particular manifestation of a particular belief(-like) state of a system on a given occasion may (and probably will, but need not always) involve several further states internal to the system—some of which may be further belief states—as well as several states external to the system.¹⁴⁶ This is given, it should be clear that this analysis is not conducive to the generation of conditionals such as:

¹⁴⁵ Although this claim might be denied by Dennett, for instance. For him, if, as at least seems plausible, ascribing beliefs and desires to the hypothalamus were a successful strategy for predicting its behaviour, then we are entitled to consider such a system as one which does have such states—see (1987).

¹⁴⁶ This manifestation will be an action of or change to the system: the occurrence of a manifestation is *not* the belief itself. On this model, the dispositional array which is a particular belief can be had whilst not manifesting at all (this is simply a particular case of the principle that dispositions can persist un-manifested to which Martin is committed—see section 1.4 of this thesis).

A believes x if A will y when z occurs;

which could be used as a reduction base for belief ascriptions. A's y-ing on z, even if generally typical of believing x, might always be prohibited by the presence of some further reciprocal disposition partners for mutual manifestation—and this cannot simply be *ceteris paribus*-ed away. This is simply a particular case of the general irreducibility of dispositions to conditionals to which Martin is committed (see sections 1.1-1.4 and 4.1 of this thesis).

Given that non-mental systems can also exhibit layered dispositional state arrays with complex interrelation between them, it seems unlikely that having these features (which, according to Martin is what having beliefs or desires amounts to) is going to fulfil the role of a uniquely distinguishing feature that sets mental systems apart from non-mental ones. Martin also considers whether there might be features unique to the sorts of dispositional state arrays which underlie beliefs and which are not found elsewhere—perhaps whilst having the sort of dispositional structure outlined above is not unique to mental systems, there might be something special about the particular details of the structure of mental systems. Martin consider three potential such features—opacity, negation and assertion—which might be thought to be exclusive to mental dispositional state arrays, and claims that we can find parallels to all these in non-mental systems. It seems that as with control, perhaps exhibiting the sorts of dispositional state arrays which Martin claims are the truthmakers for ascriptions of beliefs, desires and similar psychological states is necessary for a system to count as mental, but it is not sufficient.¹⁴⁷

Perceptions, according to Martin, are also to be understood using the resources of his account of dispositionality. Perceptions, unlike beliefs, desires, etc., are not dispositional states of the system, but rather are mutual manifestations, the reciprocal disposition partners for which include both dispositions of the system and dispositions of the immediate, proximate environment in which the system is embedded (2008, pp. 143-145). This immediate environment, in the case of the human being, includes the body; feeling our movements, proprioception, etc. are just normal cases of perception. Martin is keen to emphasise the co-priority of all sense modalities, especially what he calls tactile-motor-kinaesthetic perception, which he sees as playing a key role in developing the

¹⁴⁷ We might still reserve the use of terms such as 'belief' and 'desire' for states of mental systems, to avoid the unappealing practice of using psychological names for similar disposition state arrays in non-mental systems. However, this *presupposes* our ability to distinguish the mental from the non-mental, and so if we are to talk this like, we cannot appeal to belief and desire ascriptions in order to explain what distinguishes the former from the latter.

concept of three-dimensional space and of our personal boundaries, of the divide between me and not-me, of inner and outer (*ibid.*, pp. 162-165). The nature and content of a perception will be determined by the natures of the dispositions involved in the reciprocal partnering that produced it as a mutual manifestation, and there is no natural priority which can be afforded to either the internal states of the perceiving system or to its immediate proximate environment. Martin recognises the difficulty in presenting a full account of the details of this in even a single case of perception, stating that "[d]etails of the nature of the reciprocity of the disposition partners for some mental activities are far from clear because they would largely be internal to the organism and forbiddingly complex" (*ibid.*, p.143). That the account given might have the result that, in practice, we are unable to know the details of the symphony of reciprocal disposition partners whose mutual manifestation constitutes a given perception out not to count against the account—our metaphysics should not answer to epistemological worries, and Martin characterises such epistemological limitations as "just one consequence of realism" (*ibid.*, p.155). Nevertheless, it ought to be clear that if what perception amounts to is the mutual manifestation of reciprocal disposition partners both internal and external to the system, this is again a feature that is not different *in kind* to features that can be possessed by non-mental systems. Exhibiting the type of dispositional make-up which underlies perception again looks to be a feature that may well be necessary for a system to count as mental, but it will not be sufficient, and so it cannot serve as a unique marker by which to distinguish the mental from the non-mental.¹⁴⁸

Martin, before offering an account of intentionality, distinguishes two senses in which it might be said that a state of a system is intentional:

(7.i) its exhibiting various features such as directedness, selectiveness and prohibitiveness to things both actual and non-actual;

and:

(7.ii) its having significance and point for an agent (*ibid.*, p.150).

Unsurprisingly, (7.i), Martin states, is exhibited equally by mental and non-mental causal dispositions and complexly interrelated systems of array states of such dispositions. If intentionality is to be understood in terms of (7.i), then given the commitment of the Limit View of properties that all properties contribute to the dispositional nature of their

¹⁴⁸ What was said above regarding reserving 'belief' talk for mental systems can also be said regarding perceptual talk.

bearers, then all properties contribute to the directivities, selectivities and prohibitivities of whatever bears them: intentionality in the sense of (7.i) is ubiquitous. This given, intentionality in the first sense does not constitute a marker by which we can distinguish the mental systems from non-mental ones; all systems will bear the mark of (7.i)-type intentionality. It is conceiving of intentionality in these terms that has led Molnar (2003, pp. 60-81); Martin and Pfeifer (1986), and Place (1996) to respond that rather than being the mark of the mental (what is often known as 'the Brentano thesis'), (7.i)-intentionality is the mark of the dispositional. Exhibiting intentionality in the first sense may well be necessary in order for a system to count as mental, but it will not be sufficient.

Martin suggests that the second manner of conceiving of intentionality, not merely as being directed etc. in particular ways towards things both actual and non-actual, but rather, in so being having significance for an agent, is preferable (2008, p.151). To fail to respect the difference between (7.i) and (7.ii), and so to treat instances of each as of but a single kind, he warns, leads us towards panpsychism (*ibid.*). The sort of significance Martin seems to have in mind regarding (7.ii) is semantic; he motivates the problem with the following quotation from Fodor:

It's puzzling how a rock (or the state of having a rock in your intention box) could have a propositional object; but then, it's no less puzzling how a formula (or the state of having a formula in your intention box) could have a propositional object. It is, in fact, puzzling how *anything* could have a propositional object[...] (1987, pp. 137-8).

Martin takes the framing of the question, and the form of answer given by Fodor, to imply a wrongheaded search for particular entities which themselves display meaning or significance, perhaps irreducibly or primitively so.¹⁴⁹ In what he sees as following in the footsteps of Locke and Wittgenstein, Martin denies the possibility of providing such an answer, on the grounds "[...] that intentionality [in the second sense] and significance reside not in particulars themselves, but in their *uses*. They do not just have an intentionalistic halo." (2008, p.151). If the claim that intentionality, significance and meaning are best understood in terms of use is to be illuminating, then some account of use needs to be given.

Martin offers the following provisional characterisation of 'use':

¹⁴⁹ One might take the 'any-thing' of the quotation in particular to imply that this is the sort of solution Fodor assumes is needed.

[...] *use* is intrinsic to systems of dispositional states capable of complex, directed, combinatorial, regulative, distal adjustments and control as well as negative and positive feedback. (*ibid.*, p.177)

This characterisation, Martin notes, applies to systems both mental and non-mental. Being the sort of system that can engage in use, then, is not a marker that distinguishes the mental from the non-mental. Martin (*ibid.*, p.178) goes on to offer a more in-depth analysis of use, distinguishing between:

The instrument/mechanism of use: the manner in which the dispositional system concerned is structured such that it can engage in the relevant sort of use—Martin encourages us to think about how a water pistol and an acid pistol might have to differ compositionally in order to perform the same function, that is, expelling liquid in a particular manner.

The mode of operation: the particular ways in which the dispositional system concerned operates, that is, the various mutual manifestations for which it is directive, selective and prohibitive (etc.) with a variety of disposition partners.¹⁵⁰ At a certain level of abstraction, the mode of operation of a water pistol and an acid pistol, for example, might be exactly alike.

The material of use: this is what is put to use by the system in the mode which the system operates. Perhaps the most significant difference in the analysis of the uses of water and acid pistols respectively is the material which they use. Different materials of use need not imply (as in the case of the water and acid pistols) different instruments/mechanisms and (at some level of detail) different modes of use. The example Martin uses to illustrate this is an oven, which could be used to bake bread, make ceramics, or indeed to set off fireworks! There would be no need to alter the structure of the system in order to put the system to these different uses, and it would operate on the various materials (dough, clay, fireworks) in just the same manner (*ibid.*, p.179).

As has been noted above, mental and non-mental systems do not seem to differ in kind (although they may differ in some of the specifics) at the fundamental level with regard to the manner in which they operate, nor in the sort of mechanisms of use they employ; Martin offers the example of the autonomic nervous system in support of this

¹⁵⁰ Martin simply states that "The second aspect of use, *mode of operation*, ought by now to be familiar" (2008, p.178). I take him here to be referring to the general model for dispositionality and causation he has presented, which would be the ontological basis for the way in which a particular system works/behaves.

claim (*ibid.*, p.181). This leaves the third aspect of use—the material—as a possible hallmark of mentality, as a way in which we can distinguish the mental from the non-mental; and it is here that Martin locates just such a hallmark. In mental use alone, according to Martin, the material of use is *sensate*.¹⁵¹ Sensate material falls into two classes: sensory experience/input and imagery.¹⁵² Whereas sensory input is a matter of the mutual manifestation of some part of the system which is a sense organ and its immediate environment (which includes, in the case of some systems possessed by the human animal, its own body), imagery is entirely internal to the system. Imagery counts as sensate on the basis that it shares *qualitative* similarity with sensory input which typically comes (at least partially) from outside the system and results in output which is also (at least primarily) external.¹⁵³ When imagery (that is, material that shares qualitative similarity with typical sensory input) is put to use by the system, it usually does not lead to output external to the system (*ibid.*, p.138). Martin holds such material in special regard, calling himself a "mental chauvinist" insofar as he will reserve the terms 'mental', 'sentient', and 'conscious' for systems that exhibit use which takes as its material *both* sensory input *and* imagery (*ibid.*, p.139). The qualities which underlie the similarities between particular inputs and their corresponding images are, according to Martin, "[t]he light of the world. They are *embedded* in the inner life of our minds. They are what we go over in our heads verbally and non-verbally, they embody the sensory richness of our dreaming and the very *feel* of our feelings" (*ibid.*).¹⁵⁴ It appears we have found that which can act as a marker for the

¹⁵¹ Beliefs and desires, often considered as paradigm intentional states, are not, according to Martin, fit material for use (2008, p.179), as they are best analysed in terms of various dispositional state arrays of the system. As such, they are not apt for use. Rather, they are part of the mechanism and contribute to the mode of operation of use made by the system.

¹⁵² Martin makes it clear that not *all* sensate material available to a system, however, is actually made use of. Whilst that that is, is the locus of significance, that that is not, is not "[...]of, as, for, from or that" anything; these are the "[...]countless bodily tweaks, twinges, tingles, and visual spots, flashes, blurrings, and less than total darkness with our eyes closed or open [that go] mostly unnoticed[...]and are, it would seem, entirely useless to us." (2008, p.190).

¹⁵³ It may be worth emphasising that images are *not* qualitatively similar to what they are images of, rather, they are qualitatively similar to what it is like to perceive (receive sensory input from) what they are images of. When I imagine a horse in a paddock, my image is qualitatively similar to a perception I could have/have had of a horse in a paddock, but most likely has very little qualitative similarity to horses and paddocks themselves, however they are arranged—see Martin (2008, p.166.)

¹⁵⁴ It seems here that Martin takes the explanation for qualia to be in the qualitative similarities between sensory input and their corresponding images. Unfortunately he does not elaborate on the point here or elsewhere in (2008).

mental, a feature that a system can exhibit which will distinguish it from non-mental systems.

Martin does not understand the distinction between the mental and non-mental as one which can be drawn with neat, non-overlapping boundaries. Rather, it is a matter of degree:

If various evolving disposition arrays are interrelated in sufficiently complex ways for interrelated alternative forms of reactivity to alternative forms of *sensate* input, *then* such reactive manifestations may earn the name 'semantic or cognate use.' This, of course, is a matter of degree, as it should be. (*ibid.*, p.188)

and, of the account of use given above:

The resulting picture is tripartite. It is, as well, gradualist. We want a model for the notion of use that can take us from semantic ooze to semantic light, and that does so in a way that makes these distinctions only a matter of *degree*. (*ibid.*, p.178)

This given, we may not be able to make a non-arbitrary decision about what degree of use of sensate material is required before significance, and so mentality, can be ascribed to the goings-on-in and doings-of a particular system. There might be a perceived tension between these gradualist claims, and Martin's profession of 'mental chauvinism': if there is no non-arbitrary dividing line, one might think, we can only discuss systems as being more-or-less mental, perhaps even suggesting that the spectre of panpsychism lurks in the background of Martin's account. However, if the interpretation of Martin's account of the mind laid out above is correct, then several necessary conditions have been laid out for mentality. A system will not even be a candidate mental system unless it exhibits control; particular sorts of disposition state arrays; the necessary structures for perception, and use. The gradualism comes in once these conditions have been met. And even exhibiting these features will not guarantee the status of mental; a particular sort of material needs to be employed in the uses in which the system engages. So, whilst perhaps sharp boundaries may not be easy to draw within that limited set of cases, it does not seem that a Sorities-style slide into panpsychism is a genuine worry for Martin.¹⁵⁵ One way to put this is that

¹⁵⁵ I can envisage at least two dimensions on which the gradualism of Martin's account might be founded. First, similarity is a matter of degree, and insofar as the qualitative similarity between internal imagery and external sensory input is relevant to whether or not a system counts as mental, differences in the degree of these similarities might be the foundation for gradations between systems moving from the barely to the clearly mental. There may be no non-arbitrary point at which we can draw the line on this scale between the conscious and the non-conscious. The second is a quantitative scale, one based on *how much* use the system makes of sensate material. Again, there may be no non-arbitrary level of use that guarantees consciousness. These two ways

whilst there might be more semantic ooze out there than we first suspected, it certainly is not everywhere!

Martin's account of the mind is, in essence, an analysis in terms of complex systems of interrelated dispositions. In order to count as mental, a system must exhibit certain features: it must be capable of making adjustments to itself and its immediate environment in reaction to changes both internal and external to itself, that is, it must exhibit control; its structure must include the particular sorts of dispositional state arrays that provide the truthmakers for belief and desire statements; likewise for perceptual activity, and it must be capable of engaging in use. Furthermore, the use must be of a specific kind—it must take for its material a mixture of sensory-input and imagery—so any such system must be capable to producing internal signals which are qualitatively similar to those it receives from its environment. As the extent to which this material is put to use, and the degree to which such internal images and external inputs are similar are both matters of degree, such an account is gradualist in nature. It should be clear that Martin's account, as laid out above, does not demand any ontological novelty at the fundamental level in order to account for mentality; it is a monistic account which sees the mental as arising from particularly structured complexes of powerful qualities; that is, properties the instantiation of which contribute to both the dispositional and qualitative nature of the object which bears them. Martin himself suggests the characterisation of this position as "[...]physicalist, although not 'materialist'"(*ibid.*, p.161).

7.2 The Ontology of Mind and Body

One of the most important questions facing a philosopher tackling questions about the nature of the mind regards the ontological status of the mental. Perhaps the most pressing question on this topic is whether or not a plausible account of mental phenomena will require us to posit fundamental entities (in the broadest sense) which are ontologically independent of those fundamental entities required by a plausible account of (paradigmatically) non-mental phenomena. Unsurprisingly, there are a variety of different answers to this question. I will examine the conceptual space carved out by these answers in greater detail later in this thesis. Briefly however, one could delineate four broad classes

need not be exclusive; both may need to be taken into account in the assessing of whether a particular system counts as mental. It bears repeating that the basis is certainly *not* a matter of degrees of complexity: Martin explicitly denies this, see for instance (2008, p.193).

of answer:¹⁵⁶ three which answer the question with a 'no', albeit for different reasons, and one that answers it with a 'yes':

Idealism: "No, a plausible account of mental phenomena will not require us to posit fundamental entities (in the broadest sense) which are ontologically independent of those fundamental entities required by a plausible account of apparently non-mental phenomena, as these latter are fully accounted for by a full account of mental phenomena."

Physicalism: "No, a plausible account of apparently mental phenomena will not require us to posit fundamental entities (in the broadest sense) which are ontologically independent of those fundamental entities required by a plausible account of non-mental phenomena, as the former are fully accounted for by a full account of non-mental, that is physical, phenomena."

Neutral Monism: "No, a plausible account of apparently mental phenomena will not require us to posit fundamental entities (in the broadest sense) which are ontologically independent of those fundamental entities required by a plausible account of apparently non-mental phenomena, as both are fully accounted for by fundamental entities which it is not appropriate to characterise on a mental/non-mental binary."

Dualism: "Yes, a plausible account of mental phenomena will require us to posit fundamental entities (in the broadest sense) which are ontologically independent of those fundamental entities required by a plausible account of non-mental phenomena, as the former are not fully accounted for by a full account of non-mental phenomena."

Each of these broad classes of positions comprises a large number of precise, particular answers as to just how the ontology of mental phenomena ought to be spelled out. The very formulation of these broad answers raises questions in and of itself, most pressingly: how ought the distinction between mental and non-mental be drawn? For reasons of scope and limited space, I shall put this question to one side for now, returning to discuss it in Chapters Ten and Eleven of this thesis. In what follows I operate under the assumption that we are able to putatively and plausibly class at least some phenomena that we are pre-philosophically acquainted with into the paradigmatically mental and the paradigmatically non-mental. Philosophical investigation into the questions surrounding

¹⁵⁶ It may be possible to formulate an answer to the question of the ontology of mind and body that falls outside of these four broad classes; however, I take the four types of answer above to at least cover all the major positions currently championed in the debate.

the ontology of apparently paradigmatically mental phenomena, and which of the sorts of answers outlined above we eventually settle on regarding this, will inform us as to how much ontological weight we assign to, and perhaps as to how strictly we cleave to, our initial classifications. It is important to note that even if one settles on one of the types of answers outlined above that responds to the question posed with a 'no', this does not require the abandonment of the notion that there are informative and interesting ways of classing ontologically homogenous phenomena which may broadly reflect the initial classes of mental and non-mental. Rather, it requires that one abandons the idea that the fundamental entities which account for each class differ *ontologically* speaking. Depending on the particular flavour of the answer given, however, it is open that one might deny the notion that there are informative and interesting ways of classing ontologically homogenous phenomena which may broadly reflect the initial classes of mental and non-mental. That is, the question as to whether there is something interesting and informative about these classes is not settled by the answer given to the question of whether or not a plausible account of mental phenomena will require us to posit fundamental entities (in the broadest sense) which are ontologically independent of those fundamental entities required by a plausible account of non-mental phenomena.

By far the fiercest battle currently being fought over this particular piece of intellectual territory is that between various forms of physicalism and dualism. One might claim that there are powerful intuitive pulls towards, and intellectual dividends to be collected from, subscribing to an account of the world in purely physical terms. One appealing aspect of the physicalist world view is the relatively successful track record that the physical sciences have in rendering mysterious and complex phenomena intelligible via appeal to simple entities and simple laws. One might hope that these laws, or some extension of them (that is, one which does not involve the addition of a class of entities or laws to our current physical theory which are so radically different from currently paradigm physical entities that these additions are not recognisably 'physical'), can account for (apparently) distinctive mental phenomena.¹⁵⁷ Such a position, if defensible, offers an

¹⁵⁷ To borrow an example from Chalmers (2010, pp. 16-17), albeit for a different purpose, when it became clear that electromagnetic phenomena could not be explained in the terms of mechanical physics, new entities (electromagnetic properties) and new laws had to be added to physics. However, these additions have not been taken to indicate that there is more to the world than the physical, but rather that there is more to the physical than mechanics. The physicalist might hold that to properly account for mental phenomena, some addition to physical theory needs to be made, but that it is of a similar kind to that accounting for electromagnetism. The dualist would hold that the necessary additions to our overall theory are distinctively non-physical. Whether a

elegant and parsimonious ontology. Furthermore, one might hope that if mysterious, apparently mental, phenomena turn out to be physical, then the epistemological prognosis regarding such phenomena is encouraging. We are already well inducted in the practice of investigating complex physical phenomena. If apparently mental phenomena turn out to be simply more of the same, then we can be hopeful that by simply continuing with our current modes of investigating the world we will eventually render these mysteries intelligible. (Such mysteries include, for instance, how to understand phenomenal consciousness, or how to understand the causal relationship between the mind and the body).

However, powerful arguments such as the Argument from Conceivability; the Knowledge Argument and the Explanatory Gap have been put forward in favour of rejecting the physicalist ontology; and if these are compelling, no matter how desirable that ontology might seem, it must be rejected. In the next two chapters, I shall examine arguments against physicalism in light of an account of properties that claims all real properties are both qualities and dispositions, that is, the particular interpretation of the Limit View for which I have argued in this thesis. I will argue that these arguments are not so compelling as they might appear to be, given this theory of properties. The arguments I look at are most commonly put forward by those who propose some form of property dualism; that is, the view that in order to properly account for both physical and mental phenomena, we need to posit two fundamentally distinct types of property, that is, physical and mental properties. These can be contrasted with substance dualisms, which hold that one also needs both mental and physical kinds of substance in order to account for mental and physical phenomena.¹⁵⁸ The responses given to these arguments, by removing much of the motivation for holding a property dualist account of mind and body, lay a foundation for the neutrally monist account elaborated in the final chapter of this thesis.

particular proposed account of mental phenomena would count as more like the electromagnetism case or the dualist case is a matter that ought to be decided on the basis of the details of that particular theory.

¹⁵⁸ Of course, substance dualists are likely to also be property dualists. Property dualism, however, is consistent with substance monism.

Chapter Eight: The Argument from Conceivability

The central premise of what is often known as the argument from conceivability may well find its origin in, and be most immediately recognisable from, Descartes' claim that the mind and body can be conceived of as existing apart from one another (2008, Sixth Meditation). If they can be so conceived, the thought goes, then it is possible they could actually exist apart from one another (as for Descartes, whatever man can conceive, God can actualise (*ibid.*, p.51). Any two things that can possibly exist apart cannot be identical, and so mind and body must be distinct—and this leaves us with dualism. If dualism is true, then physicalism (and indeed any form of monism) is false. An argument that bears at the very least a family resemblance to this argument has more recently been developed and defended by Chalmers (for instance, 2010, Chapter 6). It is this argument, insofar as it is used either indirectly or directly to support dualism, that this chapter shall focus on.

Chalmers' conceivability argument is focussed on one aspect of mental phenomena: conscious or phenomenal experience. This sort of experience is *that which it is like* to undergo a particular mental process or to be in a particular mental state. Examples include:

[...]the felt quality of redness, the experience of dark and light, the quality of depth in a visual field[...] the sound of a clarinet, the smell of mothballs[...] bodily sensations from pains to orgasms; mental images that are conjured up internally; the felt quality of emotion[...] the experience of a stream of conscious thought. (*ibid.*, p.5)

We are asked to consider creatures, known as zombies, who are physically identical to us but who lack all such experience (Chalmers (1996, p.94)). Zombies appear exactly as we do. However, for all the similarity of their bodily movements and vocalisations to ours, when a zombie peers out into the gradually darkening red-hued sunset; inhales the musty smell of her closet whilst strains of the next door neighbours' daughter's clarinet practice come screeching through the wall; when she cries out wildly due to the touch of a red hot poker, or that of her lover (and so on...), there is *nothing* that it is like to be her, none of this is accompanied by conscious experience. The zombie is able to react and respond; to manipulate her environment; to regulate herself, just as we would in each of these situations—but there is nothing it is like to do so. If this seems too far-fetched, Chalmers claims we need not rely on full zombies, but partial ones, who lack some aspect of experience (2003, section 3.2), or what he calls inverters: creatures who do not lack any

particular experiences, but rather experience differently than we do, perhaps they experience red when we experience green, and vice versa (*ibid.*). It is worth reiterating at this juncture that these creatures (zombies, part-zombies and inverts) are to be *exact physical duplicates* of subjects of conscious experience such as ourselves.¹⁵⁹ Zombies may well inhabit zombie worlds; worlds that are complete physical duplicates of our own, but without any conscious experience. In such a world, for example, my zombie twin is currently sat typing about zombies, just as I am here (1996, pp. 94-95), but there is nothing it is like for my twin to do so. The first premise of Chalmers' argument is that such creatures are conceivable.

8.1 Some Preliminary Distinctions

Before I go on to outline Chalmers' version of the argument from conceivability, I need to draw a number of distinctions that play a role in the argument. The first regards the distinction between the physical and experience. When Chalmers discusses the physical, he means by this the fundamental entities and laws which figure in a complete account of microphysics (2010, p.142), something he sees as inevitably "com[ing] down to two things: the structure and dynamics of physical processes" (1996, p.118). So the claim that zombies (or part-zombies, or inverts) are conceivable is the claim that there could be creatures who are identical to ourselves in terms of their microphysical composition, structure, dynamics and the microphysical laws which govern them, but which lack experience entirely (or partially, or differ in the nature of their experience). The relevant conception of conscious experience for this discussion is that outlined in the previous paragraph.

The second is a distinction between ideal, *prima facie* and *secunda facie* conceivability.¹⁶⁰ Briefly, something is *prima facie* conceivable for a conceiver when, on first glance, it appears to be conceivable (to avoid circularity here, some criteria will need to be given for conceivability, more of which momentarily) (2010, pp. 143-144). This is to be contrasted with *secunda facie* conceivability. Something is *secunda facie* conceivable for a conceiver when it is *prima facie* conceivable and remains conceivable after some sustained rational scrutiny to ensure that it really does meet whatever criteria is being applied for conceivability (*ibid.*). Ideal conceivability is that which is conceivable for some ideal

¹⁵⁹ So a red-green colour-blind person is not an example of an invert, as a relevant physical difference (in the cones present in the eye, for instance), is present.

¹⁶⁰ For a full account of this distinction, and those that follow, see Chalmers (2002).

conceiver.¹⁶¹ Secunda facie conceivability for us, Chalmers claims, is an excellent guide to ideal conceivability (2002, p.197).

Thirdly, positive and negative kinds of conceivability are to be distinguished. Chalmers is much clearer about what constitutes negative conceivability: something is negatively conceivable when it is not ruled out *a priori*, or when it does not entail a contradiction (*ibid.*, p.149). Positive conceivability, on the other hand, is a much harder notion to pin down. Chalmers says that:

Positive notions of conceivability require that one can form some sort of positive conception of a situation in which S is the case. One can place the varieties of positive conceivability under the broad rubric of *imagination*: to positively conceive of a situation is to in some sense imagine a specific configuration of objects and properties. It is common to imagine situations in considerable detail, and this imagination is often accompanied by interpretation and reasoning. (*ibid.*, p.150)

Exactly how much philosophical weight such a conception is able to bear is a controversial issue. However, the version of the conceivability argument that will be considered in this chapter only invokes negative conceivability, and so thankfully we need not engage in the difficult task of unravelling just what a positive conception is, and what the philosophical ramifications of such a conception are. The notion of negative conceivability provides us with a criterion by which to judge prima facie, secunda facie and ideal conceivability. Something is prima facie negatively conceivable if it does not entail a contradiction on first glance, secunda facie negatively conceivable if no entailment of a contradiction can be uncovered following sustained rational scrutiny and ideally negatively conceivable if an ideal conceiver could not detect the entailment of a contradiction from what is being conceived.

A fourth distinction which plays an important role in some formulations of Chalmers' version of the argument from conceivability is that between primary and secondary (or 1- and 2-) possibility. Again, I shall only outline this distinction briefly, as little that I have to say in this chapter turns on the distinction. (For Chalmers' own account see, (1996, chapter 2) or for a full discussion of both the foundations and applications of this distinction see Garcia-Carpintero, M. and Macia, J., eds., (2006).) Something is primarily possible if it is possible that it could actually be the case, if it is a way the world might

¹⁶¹ There are certainly problems that arise with the concept of an ideal conceiver, and it is less than clear to me what it would take for some conceiver to be one. However, nothing I say in what follows will turn on this, and so I am happy to grant Chalmers the notion. He discusses some such problems, and tentatively indicates what an account of an ideal conceiver might look like in (2002, p.148).

actually be. In contrast, something is secondarily possible if it is a way the world might have been. From this we can draw a distinction between primary and secondary conceivability. What is primarily conceivable is what can be conceived of keeping what we know about the actual world fixed, what is secondarily conceivable is that which we can conceive of counterfactually. Chalmers draws on the distinctions between primary and secondary conceivability and possibility in order to defend the second premise of his argument from conceivability (that conceivability can lead us to possibility). As I do not challenge his argument on these grounds, I shall not delve deeper into this issue here.

Various combinations of *prima facie*/*secunda facie*/*ideal*; positive/negative and primary/secondary conceivability lead us to be able to formulate twelve different sorts of conceivability. Most of these receive some treatment in Chalmers (1996). As stated above, the discussion in this chapter is not sensitive to the primary/secondary distinction, and will not be concerned with the (somewhat nebulous) notion of positive conceivability. Intellectual honesty and philosophical prudence dictates that whilst we must begin pre-theoretically with *prima facie* conceivability, we ought always to pass over it in favour of *secunda facie* conceivability: if we want to put any weight on what at first glance appears conceivable, it is incumbent on us to subject this appearance to sustained rational scrutiny. This leaves on the table *secunda facie* negative conceivability and ideal negative conceivability. As noted above, the former is considered by Chalmers to be a very good guide to the latter, and it is on the latter that the version of Chalmers' argument I will be discussing in this chapter relies.

8.2 Chalmers' Argument from Conceivability

The version of Chalmers' argument that I present below is reconstructed from the several different iterations of it he presents in Chapter 6 of (2010). I have omitted those parts of the argument that are not pertinent to the discussion at hand (such as references to the distinction between primary and secondary conceivability and possibility), and where he has used some symbolic shorthand, I have written out the argument fully. Despite these changes in presentation, and certain omissions, I hope I have presented Chalmers' argument accurately and charitably. Chalmers' argument from conceivability runs as follows:

(P1) It is ideally negatively conceivable that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there;

(P2) If it is ideally negatively conceivable that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there, then it is possible that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there;

(P3) If it is possible that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there, then physicalism is false;

(C1) Physicalism is false.

It ought to be noted that if this argument is intended to lend direct positive support to a dualistic account of the ontology of mind and body (I do not intend to attribute this usage to Chalmers), then an additional premise and conclusion need to be added:

(P4) If physicalism is false, then dualism is true;

(C2) Dualism is true.

Premise one makes the claim that an ideal conceiver possessed of all relevant information could derive no contradiction from, or could not rule out *a priori*, the notion of a world which is an exact physical duplicate of our world at which nothing undergoes conscious experience (a zombie world); or one at which some of the physical duplicates of our-worldly subjects-of-experience undergo less conscious experience than their our-worldly counterparts (a partial zombie world), or one at which some of these duplicate entities undergo different conscious experiences (an invert world). Premise two affirms the link between ideal negative conceivability and possibility. Premise three claims that such a possibility is incompatible with a physicalist account of the ontology of mind and body. The conclusion (and supplementary premise and conclusion necessary to make this argument a positive one in support of dualism) ought to be clear.

8.3 Responding to the Argument: Part One

There are a number of ways one might respond to Chalmers' argument. It is worth noting at this point that the argument appears to me to be valid, and so any response will

question the soundness of the argument. Premise three ought to be relatively uncontroversial. Thus, responses to the argument will target the viability of premises one (the conceivability claim) and two (the link between conceivability and possibility). I will briefly outline two potential responses which, whilst I am sympathetic to the moves they make, I shall not be putting forward in this chapter. The first challenges premise one, and the second involves a denial of premise two. Following this, I shall formulate a response to the argument based on the account of the ontology of properties put forward in this thesis which denies premise one.

Chalmers' first premise affirms that an ideal conceiver could not rule out *a priori* the existence of a zombie world. Clearly, as we are not ideal conceivers, nor are we acquainted with ideal conceivers, we do not have direct evidence or proof for this claim.¹⁶² Therefore, in order to be able to assert premise one with any force, we need some sort of guide to what could and could not be ruled out *a priori* by an ideal conceiver.

As discussed above, Chalmers' claims that we have an excellent guide to this in *secunda facie* negative conceivability; that is, in those notions we find are not ruled out *a priori* after sustained rational scrutiny. One might question how much weight this can bear, however. First, it ought to be noted that this *cannot* be a perfect guide to ideal negative conceivability, for if it were, then everything that is negatively conceivable *secunda facie* would also be negatively conceivable ideally, and vice versa. If this is the case, then it is hard to see how we can draw any distinction between ideal and *secunda facie* conceivability; indeed, we seem to have cast ourselves in the role of the ideal conceiver. Given that there must be a gap, it is open to Chalmers' opponent to ask just how large this gap might be. Chalmers' affirms that *secunda facie* negative conceivability is an excellent guide to ideal negative conceivability (2002, p.197), and thus that the gap is small, thereby lending a high degree of probability, if not certainty, that what cannot be ruled out *a priori* *secunda facie* will not be so ruled out ideally.

But what could license such a claim? It seems in order to do so, one would need a representative sample of notions not ruled out *a priori* *secunda facie* which could be demonstrated to be for the vast majority also not ruled out ideally; but it is very hard to see how such a comparison could be made. Thus, Chalmers' opponent might conjecture that we have no reason to affirm the link between *secunda facie* and ideal conceivability, and

¹⁶² Indeed, one might even question whether we have any clear idea of what being an ideal conceiver entails. This is not a line of thought I shall follow up here, however.

therefore no reason to affirm premise one, notwithstanding the *secunda facie* negative conceivability of zombies. It would be a disingenuous, if tempting, response for the defender of Chalmers' argument, to demand some examples of where these two come apart in order to motivate the criticism: as any claim that we can identify as ruled out *a priori*, even if for some time we took it not to be so, will be, per definitionem, ruled out *secunda facie*, and therefore not an example of something which is negatively conceivable *secunda facie* but not so ideally. There is no example we could possibly give of such a notion, and so it is unreasonable to demand one. There may be something to such a response to Chalmers', however, to establish the force of such a response would require far more attention than I can dedicate to the question here. For the purposes of what follows, I am willing to grant that *secunda facie* negative conceivability is a good—although not perfect—guide to ideal negative conceivability.

Another way one might respond to Chalmers' argument (and one which has been more common in the literature than that which I have outlined above (see, for instance, Hill and McLaughlin (1999))) would be to deny the truth of premise two, that is, to deny that ideal negative conceivability entails possibility. If conceivability does not entail possibility, that is, if some things which are not ruled out *a priori* by an ideal conceiver with all relevant information, are nonetheless impossible, then Chalmers' argument does not go through. In spite of the fact that the notion of a zombie world does not entail any contradiction, if this criticism is correct, then this in no way guarantees that such a world is a genuine possibility. And as it is the possibility, and not the conceivability, of a zombie world which mitigates against physicalism, if the link between these two is severed, then we have no reason to take the conceivability of a zombie world to lead us to the falsity of physicalism.

Chalmers' discusses a number of ways this attack might be elaborated (2002). He responds by drawing on the resources of two dimensional semantics to distinguish between different notions of both conceivability and possibility, and attempts to establish a link between certain types of conceivability and possibility which are not vulnerable to the sort of criticism laid out above. Whilst I have sympathy with the claim that conceivability may not entail possibility, it is not a line a criticism that I will be pursuing here. The debate surrounding this question is complex, and Chalmers' response (for a full account, see (2010, section 3.6)) is subtle and nuanced. A proper treatment of this aspect of the debate surrounding the argument from conceivability would require far more space than I am able to dedicate to it here, and so in what follows, notwithstanding my sympathy for this line of

criticism, I grant the proponent of the Argument from Conceivability the truth of premise two, that is, I accept the link between ideal negative conceivability and possibility.

8.4 Responding to the Argument: Part Two

The response I will give to the argument from conceivability as developed by Chalmers targets premise one: the claim that a zombie world is ideally negatively conceivable. To appreciate the force of the response, we need to first take a closer look at the premise, and consider exactly what it is that we are being asked to accept as conceivable. The premise states:

(P1) It is ideally negatively conceivable that a world which is an exact physical duplicate of our world differs from our world in terms of the conscious experiences that occur there

That this premise is open to examination is a point often missed. Tim Crane, in his discussion of the argument, for instance, states "Premise (1) is also fairly uncontroversial[...] all [it] requires is that one can conceive of a physical replica of any phenomenally conscious creature which lacks [such consciousness]. This is clearly conceivable." (2001, p.100). Before we should give our assent to this analysis of the premise, we need to be clear on both what it means for some world to be an exact physical duplicate of our own, and what it would take for such a world to differ in terms of the conscious experiences that occur there. Only then will the conceivability of the premise acquire the 'clarity' Crane and others attribute it with.

These issues are ontological in nature, they concern what sorts of entities (in the broadest sense) there are in both our own world and the putative zombie world. How one answers these questions will depend on the sort of fundamental ontology one subscribes to.¹⁶³ Throughout this thesis I have been working within the framework of an object based ontology. Objects, on this account, are propertied-substances, and form the most fundamental ontological category. What it would take for some world to be a physical duplicate of this world then includes, but may not be limited to:

¹⁶³ With one caveat: one cannot, in the context of this debate, appeal to a fundamental ontological distinction between the physical and the conscious in how one settles these questions. To do so would be to beg the question in favour of dualism, the very position the argument is supposed to promote (either directly, with the supplementary premise and conclusion given above, or indirectly, simply by mitigating against physicalism).

- (8.i) it containing duplicates of all the physical objects found in this world;
- (8.ii) these objects being arranged in the same manner;
- (8.iii) these objects having the same physical histories (past arrangements);
- (8.iv) these objects being subject to the same physical laws.

Condition (8.i) requires some further specification in terms of the sort of ontology being worked with in this thesis. For an object to be a duplicate of another object (physical or otherwise) it would need to instantiate exactly similar properties in an exactly similar pattern, both synchronically and diachronically. There may be other conditions. For instance, one might think there needed to be some shared quiddity between the substance and its duplicate, but on this matter I shall remain neutral, as it does not bear on what follows. The condition that will play an important role in my response is that regarding properties, and I hold that this is at the very least amongst the necessary conditions for some-thing to be a physical duplicate of some other thing.¹⁶⁴

A response to this line of criticism might spring almost immediately to mind: the proponent of the argument from conceivability could simply deny this particular account of fundamental ontology, thus avoiding any ramifications it has for the argument. First, I take the basic tenets of this ontology to enjoy a respectable degree of plausibility and have independent motivation, and so I shall not defend them here. The purpose of this section is to show how accepting such an ontology allows one to respond to arguments such as that from conceivability, rather than to present arguments in favour of such an ontology. That adopting the ontology put forward in this thesis can furnish a line of response to arguments such as that from conceivability will be of special significance to those who are sympathetic to the ontology proposed and to the argument from conceivability—they may find they need to reassess one of their sympathies—and it may add appeal to such an ontology for those who appreciate the force of the argument but are uncomfortable with its conclusions. Secondly, and perhaps more importantly, a key concept in the argument is that of duplication. Duplication, conceptually speaking, involves similarity; perfect duplication, exact similarity. Properties are what characterise objects, and as such, they provide the dimensions along which objects can be similar or dissimilar. Regardless of the general account of ontology the proponent of the Argument from Conceivability puts forward, they are going to have to provide *some* account of properties (whether their

¹⁶⁴ It would seem perverse to insist that A was a physical duplicate of B if these two instantiated dissimilar physical properties.

fundamental entities are objects, facts, states of affairs or whatever...) in order to give any substantive role to the notion of duplication. As will be seen below, it is the account of properties put forward in this thesis that will be operative in the response to the argument, and if what I have said above is correct, any proponent of this argument will have to have some such account.

As we have seen, an account of properties is essential to the proper understanding of premise one. Without a conception of what sorts of things properties are, one cannot conceive of duplication *per se*, and so not of physical duplication without a duplication of conscious experience. For some-thing to be a physical duplicate or some other thing, as has been shown, is for it to instantiate exactly similar physical properties in an exactly similar pattern both presently and throughout its history. Could the proponent of the argument claim that we do not need a positive account of properties to conceive of duplication, we can simply fill in the blanks with some sort of conceptual placeholder? I contend that they cannot. Remember, the account of conceiving in play here is that of not being able to uncover a contradiction *a priori*. Without a positive conception of the relevant notions, one cannot, with confidence, endorse the claim that no such contradiction arises. The demands of sustained rational scrutiny which amount to *secunda facie* conceivability require of us that an account be given.

For something to be a physical duplicate, is for it to instantiate exactly similar physical properties; that is, for Chalmers (see above), for it to instantiate exactly similar structural and dynamic properties at the microphysical level. Structural and dynamic properties, at first glance, seem like ideal candidates for characterisation in purely dispositional terms. These are to be contrasted, remember, with conscious experiences; things which, in the quotation given above, Chalmers characterises with the term 'quality' multiple times. Conscious experiences of the sort relevant to the current discussion, at first glance, seem like ideal candidates for characterisation in purely qualitative terms. If this is correct, then what we are asserting the conceivability of in asserting premise one, is that there could be some world which is an exact dispositional duplicate of our world, but which differs with regard to its qualitative nature; that is, that the preceding notion cannot be ruled out *a priori*, that it does not entail any contradiction.

That Chalmers' notions of physical phenomena and conscious experiences seem apt to be characterised in purely dispositional and purely qualitative terms, respectively, gives us reason to doubt (according to the account of properties put forward in this thesis) that what they pick out are *properties*. A proponent of the Limit View of properties does

not need to subscribe to the view that therefore these descriptions are erroneous, but rather that any inference from the validity of such descriptions to the claim that there are therefore pure dispositions or pure qualities is erroneous. Objects can be described in purely dispositional terms, just regarding how they will behave in a variety of situations; and likewise they can be characterised in purely qualitative terms, regardless of their potential behaviours. But neither of these characterisations is exhaustive, for the properties which, in complex combinations, are the truthmakers for these purely dispositional or purely qualitative descriptions are themselves purely *neither*, and impurely both. For a proponent of the Limit View, dispositions and qualities are identical. If duplication is to be characterised in terms of the instantiation of exactly similar properties, and if the notions of the physical and the consciously experiential in play in Chalmers' argument do not pick out properties, then the question surrounding the conceivability of a physical-but-not-consciously-experiencing-duplicate is less clear cut than it might at first have appeared to be, for we cannot straightforwardly identify some set of physical (purely dispositional) properties which are instantiated by both objects in the duplication-pair, and some set of conscious experience (purely qualitative) properties which are instantiated by only one of the objects in the duplication-pair.

Can a contradiction be derived from the combination of the arguments from conceivability's first premise and Limit View? I believe there can be. It has been suggested above that the proponent of the argument is committed to the claim that there could be a world alike in all its dispositional features to our own but differing somehow in at least some of its qualitative features. But according to the ontology of properties put forward in this thesis, dispositional and qualitative features are bestowed in virtue of properties in complex combinations, each of which makes specific contributions to both the overall dispositionality and overall qualitativity of the objects that instantiate them. These specific dispositional and qualitative contributions are identical to one another, and to the property itself. But the notion of an exact physical duplicate (that is, an object that instantiates properties that make exactly similar dispositional contributions) which is not a duplicate in terms of conscious experience (that is, an object that instantiates properties that do not make exactly similar qualitative contributions) fails to respect this identity. Given the transitivity of identity, a contradiction can be derived. Where D stands for some particular dispositional contribution made by some property, and Q for the particular qualitative contribution made by that same property, the Limit View asserts that:

$$(8.v) \forall x(Dx \leftrightarrow Qx);$$

which entails:

$$(8.vi) \neg \exists x(Dx \wedge \neg Qx);$$

but what we are being asked to conceive in premise one is that some object instantiates properties that make exactly similar dispositional contributions but not exactly similar qualitative ones, that is:

$$(8.vii) \exists x(Dx \wedge \neg Qx);$$

so, the combination of the Limit View and premise one of the argument from conceivability yields:

$$(8.viii) \neg \exists x(Dx \wedge \neg Qx) \wedge \exists x(Dx \wedge \neg Qx);$$

which is a straight contradiction. The account of properties put forward in this thesis gives one the tools to make a principled denial of the first premise of the argument from conceivability. Furthermore, the account is motivated by *a priori* considerations (see Chapter Three of this thesis) which are independent of the issues in the philosophy of mind which are at stake in this account, and so cannot be accused of simply begging the question in favour of the inconceivability of zombies.

I am not the only person to have appealed to the Limit View of properties in order to respond to the argument from conceivability. Heil highlights the inconsistency between this view of properties and the possibility of zombies, stating:

Qualities and powers cannot vary independently. The possibility of zombies depends on the denial of this thesis. (2003, p.248)¹⁶⁵

His attack on the argument focuses on the possibility, rather than the conceivability, of zombies. I have opted to aim at the latter, in order to fend off a potential response from the proponent of the argument. It might be held that if our modal epistemology comes into conflict with certain claims made by our ontology, then this highlights some problem with the ontology outlined. Proponents of the argument from conceivability, as I have presented it here, take *secunda facie* negative conceivability to be an excellent guide to ideal negative conceivability, which in turn is seen as a perfect guide to possibility. They might hold, therefore, that if a certain ontological position comes into conflict with what they take to be possible (via conceivability), this is simply evidence against that position. The strongest line of attack, then, is to show that first, for the conceivability claim to even get off the ground, *some* ontological account of properties or other must be given. This is not

¹⁶⁵ See also Heil and Robb (2003, p.189).

something the proponent of the argument from conceivability can defer or remain quiet about. Secondly, given a certain account—the Limit View—the conceivability claim itself cannot be maintained.

I have shown that, given the inevitability of settling on a substantive account of properties for the proponent of the argument from conceivability, the notion of zombies entails a contradiction *a priori*; rendering them inconceivable by the lights of Chalmers' own account. Given this, questions of the relative status of conceivability and ontology with regards to our modal epistemology dissolve: the former is inextricably tied to the latter, and it is no longer open to the proponent of this argument to claim that the clash between the Limit View and the possibility of zombies highlights a defect with that ontology. Of course, the proponent of the argument from conceivability may wish to deny the Limit View altogether, but she *cannot* do that on the grounds that it clashes with the possibility of zombies, on pain of begging the question. She will need both an alternative account of properties, and independent motivation for adopting that account rather than this one.

Another response the proponent of the argument from conceivability might make to the claims made above is that even if one accepts that every real property makes both a dispositional and a qualitative contribution to whatever bears it, these contributions could come apart modally; that is, that an exactly similar property that makes contributions D1 and Q1 at this world might make entirely different contributions—D2 and Q2, say—or partially different contributions—D1 and Q2, say—at some other world. One needs to be clear on what would need to be the case in order for these to represent genuine possibilities. The first case, where an exactly similar property makes completely different contributions in a different possible world, requires that we have a very peculiar account of property similarity. The natural way to consider two properties as members of the same exact resemblance class (the trope theorist's equivalent to calling two properties 'the same') would be in terms of those properties making exactly similar contributions to the objects that bear them. If we give up on this way of grouping properties as the 'same', we will need some other principle, by which to do so. The only option seems to be a quidditism according to which the identity of properties is trivial and brute (see section 2.3 or, for instance, Bird 2007, fn.38). Such a conception, however, will not help the proponent of the argument from conceivability. If we are to accept that two objects located at different worlds are duplicates of one another in virtue of bearing certain properties that can be considered the 'same', but which make wholly dissimilar contributions to those objects, we seem to have given up on any notion of duplication which is of philosophical interest. It is

also hard to see what would license, as the proponent of the argument would require, us considering these as specifically *physical* duplicates and specifically *not* duplicates in terms of conscious experience.

Much more promising is the second notion that perhaps exactly similar physical properties (properties considered in terms of their dispositional contribution) could contribute in distinctive ways in terms of qualitativity at different worlds. If one accepts the Limit View, zombie worlds may still not be conceivable, as these properties will always make *some* qualitative contribution, but, importantly, invert worlds will be conceivable (worlds which are physical duplicates but at which some conscious experiences are *different* rather than absent). Chalmers' takes the possibility of invert worlds to be enough to establish the anti-physicalist conclusion he is aiming at (1996, pp. 99-101), and if my response allows for them, then it is of little relevance to the debate being examined here. On what sort of view might it be possible for properties that make an exactly similar dispositional contribution to their bearers to make dissimilar qualitative contributions? One reason one might consider this a live possibility is not taking the identity claim of the Limit View seriously, and instead considering properties as somehow made up of a dispositional and a qualitative bit which could be freely recombined (see sections 3.3-3.5 and 4.1 of this thesis for further discussion of this notion). I have argued already that this is to misinterpret the Limit View of properties. As such, without independent motivation and support it is of little value as a response to the claim that dispositions and qualities do not vary independently of one another.

Another reason one might take the notion that the dispositional and qualitative contributions made by a property can vary independently of one another to be plausible is if one thought something like the following: properties are *really* qualities, but they all also make a dispositional contribution to whatever bears them in virtue of the laws of nature that hold at the world they are instantiated in. Thus, in different worlds with different laws, Q1 and Q2 could make the same dispositional contributions/play the same dispositional role. However, this manner of characterising the situation is of little use as a response to the challenge to the argument from conceivability laid out above. First, it also fails to properly understand the Limit View: there is no direction in which properties are *really* either qualitative or dispositional, and only circumstantially or contingently the other. Secondly, remember that a physical duplicate world must have the same physical laws of

nature in place as those in the world it is to be a duplicate of.¹⁶⁶ These putative laws, which determine what dispositional role is to be played by which qualities, could be argued to be physical according to the characterisation of 'physical' offered by Chalmers; that is, concerned with the dynamics of the fundamental entities of the world in question, and, if so, then they cannot vary between worlds considered as physical duplicates.

A final reason one might take this to be a viable possibility is if one interpreted the identity claim of the Limit View as a claim about an *a posteriori* necessity. At least one supporter of this position, Jonathan D. Jacobs, makes this interpretation (2011, pp. 89-90). Chalmers' discusses how *a posteriori* necessities might bear on his account extensively, and provides convincing arguments, utilising the resources of two-dimensional semantics, to show that an appeal to this class of identities do not pose a challenge to his argument (for instance, 2010, section 3.6). Briefly put, the idea is that if the identity between the physical (dispositional) and conscious experience (qualities) is an *a posteriori* one, then whilst strictly speaking these two could not vary independently, we must allow for a variation analogous to that between water being identical with H₂O and watery-stuff being identical with XYZ on Twin Earth. If this is granted, Chalmers' is able to exploit a peculiar feature of qualities: whilst we might maintain a genuine distinction between water and watery-stuff, it is plausible that no such distinction can be maintained between some quality Q1 and Q1-y-stuff. If this is the case, and so the same quality can play different dispositional roles in different worlds, then qualities and dispositions can vary independently of one another, and the conceivability of zombies (or at least inverts) is back on the table. As discussed elsewhere in this thesis, however, I do not think this is the correct manner in which to characterise the identity claim made by the Limit View.¹⁶⁷ The identity between the qualitative and the dispositional is not like that of the Morning and Evening Star; two putative objects that turned out to be one, nor is it like that of water and H₂O; that of an imprecise pre-scientific conception of a substance being coupled with precise scientific account of the substance's internal constitution. Rather, the reasoning in favour of the identity claim is *a priori* in nature, and concerns the nature of a certain fundamental

¹⁶⁶ They can of course vary with regard to non-physical laws, if there are any contingent non-physical laws out there with regards to which worlds can vary.

¹⁶⁷ Jacobs (2011) suggests that this is how the Limit View should be interpreted. However, the vulnerability of this interpretation to a Chalmers-style two-dimensional argument to establish that qualities and dispositions can vary independently of one another is a serious problem.

ontological category: properties. I have given an extended account of how one ought to understand the identity claim in Chapters Five and Six of this thesis.

Notwithstanding the arguments given so far in this section it may still occur to some to think that somehow zombies, part-zombies and inverts *ought* to be conceivable.¹⁶⁸ If this normative intuition is strong enough, it may lead one to conclude on those grounds that there must, therefore, be something wrong with an account of properties (such as the Limit View) which rules out zombies (and co.) *a priori*. If anything ought to be conceded to someone who formulated this sort of response, it is that there does not seem to be anything immediately troubling or difficult about forming a mental picture in one's mind of something that looks exactly like a human, goes around doing all sorts of human behavioural activities, but which differs with regard to conscious experience. Doing this might be taken by some to be 'conceiving'. The challenge to the Limit View is to plausibly accommodate this intuition, or, to put it another way, to provide an error theory for the argument from conceivability. If it can do so then the force this response has against the Limit View will be dispelled, and therefore it poses little problem for the challenge I have levelled at the argument from conceivability.

It is important to be clear about what needs to be accommodated here: the possibility of something that looks exactly like a human, engages in all sorts of human-like behavioural activities, but which differs with regard to conscious experience. Such an entity, it must be recognised, does not automatically meet the requirements of the first premise of the argument from conceivability: it is a further step to assert that this entity is a *physical duplicate* of a human being. The Limit View can accommodate the intuition in favour of the conceivability of this sort of entity. Remember that on this account dispositions are multi-track (see section 1.4 of this thesis); and the having of a certain property disposes the bearer to behave in an infinity of ways with an infinity of different reciprocal disposition partners. Given this, certain properties will share some of what they dispose their bearers to do; although no dissimilar properties will dispose bearers in *exactly* the same way. These properties which share some of the dispositional contribution they make to their bearers will nonetheless differ in terms of the qualitative contribution they

¹⁶⁸ Which if I am entirely frank I take to arise from nothing other than the ability one has to picture something like a person from which one then abstractly plucks the conscious experiences without any thought to *how* or *why* this might be possible. This sort of imagination I think is akin to what Chalmers calls 'positive conceivability' (see section 8.1 above), and I take it to be an extremely poor guide to metaphysical possibility, although I shall not pursue this line of thought any further here.

make. It seems to me that there could be two entities that were propertied such that they had substantial dispositional overlap with regards to all the reciprocal disposition partners one would normally expect them to come into contact with, but which diverged radically with regards to atypical partners. These would not however be dispositional (and therefore physical) *duplicates* of one another, they would simply appear as such when considered in a limited sense, or at a sufficiently coarse level of grain. The genuine possibility of these sorts of entities, whilst they do not fulfil the criteria of the first premise of the argument from conceivability, ought to satisfy the intuition that we can conceive of something that looks exactly like a human, engages in all sorts of human-like behavioural activities, but which differs with regard to conscious experience.¹⁶⁹ That we can comfortably form a picture of such an entity in our mind—and indeed the genuine metaphysical possibility of such an entity—has no bearing on the truth or falsity of the first premise of the argument for conceivability, for whilst such things are similar in various ways to human beings, they are most certainly *not* duplicates of them in the relevant sense.

In this section, I have argued that in order for the conceivability claim which forms premise one of the argument from conceivability to be intelligible, some substantive account of properties needs to be given, for in the absence of such an account, we cannot make sense of the notion of duplication. I have tried to be as charitable to this argument as possible, accepting its account of conceivability, and the (not uncontroversial) claim that from this sort of conceivability one can draw substantive conclusions about possibility. I have demonstrated that accepting the account of properties put forward in this thesis—the Limit View—renders premise one of the argument false. Making explicit what it would take for there to be zombies, part-zombies or inverts—that is, the independent variation of the dispositional and qualitative contributions made by exactly similar properties—uncovered a contradiction which hitherto lay unnoticed. Zombies, part-zombies and inverts are shown, by the lights of the Limit View, to be *secunda facie* negatively inconceivable, and thus we have no reason to suppose they are ideally negatively conceivable, that is, to suppose the truth of premise one. I have responded to a number of objections that might be raised against my challenge to the argument from conceivability, and have attempted to dispel any lingering intuition that might remain that somehow zombies, part-zombies and inverts *ought* to be conceivable. In the next section I examine another argument often seen to favour dualism: the Knowledge Argument.

¹⁶⁹ Stoljar (2007) makes a similar argument, albeit differently supported, appealing to *apparent* conceivings of zombies.

Chapter Nine: The Knowledge Argument

Another important argument in the debate surrounding the ontology of mind and body is often known as the argument from knowledge. The basic idea of the argument is that it is possible to be in possession of complete physical knowledge of a certain system which is capable of conscious experience of some sort or another, whilst lacking knowledge of *what it is like* to have the sorts of conscious experiences that that system has. Arguments which make use of this sort of thought can be found in the work of numerous philosophers, including C. D. Broad (1925); Herbert Feigl (1958) and Thomas Nagel (1974). Perhaps the most notorious formulation of the argument from knowledge is that which Frank Jackson put forward in his article 'Epiphenomenal Qualia' (1982). In this article, Jackson asks us to consider a fictional neuroscientist, Mary:

Mary is a brilliant scientist who is, for whatever reason, forced to investigate the world from a black and white room via a black and white television monitor. She specialises in the neurophysiology of vision and acquires, let us suppose, all the physical information there is to obtain about what goes on when we see ripe tomatoes, or the sky, and use terms like 'red', 'blue', and so on. She discovers, for example, just which wave-length combinations from the sky stimulate the retina, and exactly how this produces via the central nervous system the contraction of the vocal chords and expulsion of air from the lungs that results in the uttering of the sentence 'The sky is blue'[...] What will happen when Mary is released from her black and white room or is given a colour television monitor? Will she learn anything or not? It seems just obvious that she will learn something about the world and our visual experience of it. But then it is inescapable that her previous knowledge was incomplete. But she had all the physical information. Ergo there is more to have than that, and Physicalism is false. (p.130)

The argument can be set out as follows:

(P1) Mary knows all the relevant physical facts before being exposed to coloured objects;^{170 171}

¹⁷⁰ To whatever one considers to fall within the scope of the example—likely candidates being the neurological information; information regarding the behaviour of light radiation; information regarding the surface textures of mid-sized objects; information regarding the micro-physical structure of such objects, etc.

¹⁷¹ Jackson's presentation of the argument quoted above is in terms of 'information', but the majority of the subsequent debate is couched in terms of 'facts', and so I shall adopt this terminology.

(P2) When exposed to coloured objects, Mary learns something both relevant and new;

(P3) If Mary learns something new when exposed to coloured objects, then not all facts are physical facts;

(P4) If not all facts are physical facts, then physicalism is false;

(C1) Physicalism is false.

It ought to be noted that if this argument is intended to lend direct positive support to a dualistic account of the ontology of mind and body (I do not intend to attribute this usage to Jackson), then an additional premise and conclusion need to be added:

(P5) If physicalism is false, then dualism is true;

(C2) Dualism is true.

Premise one asserts that someone who has never been exposed to coloured objects, but has been schooled in certain scientific disciplines can be in possession of all the relevant physical facts regarding colour experiences, and that Mary is such a person. Premise two is the claim that such a person, when they are exposed to coloured objects for the first time, notwithstanding their complete physical knowledge, learns something new. Premise three asserts a link between the learning of something new and the existence of facts which correlate to the something new that has been learned. Premise four encodes Jackson's conception of physicalism as the "thesis[...] that all (correct) information is physical information" (*ibid.*, p.127); which I am taking as equivalent to the claim that all facts are physical facts, a conception which he hedges by noting that physicalism is notoriously difficult to define. It may occur to the reader at this point that Jackson's conception of physicalism differs somewhat from the one I outlined earlier (see section 7.2). However, I do not think anything turns on this difference: Jackson later in the paper makes an explicit link between there being some new information (or new fact) and there needing to be a novel property or property-type (*ibid.*, p.132), and it will come as little surprise to the reader that my response to this argument will be focussed on how the account of properties put forward in this thesis bears on the conclusions the argument makes. The conclusion (and supplementary premise and conclusion necessary to make this argument a positive one in support of dualism) ought to be clear.

Before moving on to look at some potential lines of response to the argument from knowledge, it is worth noting that Jackson has since rejected the argument, arguing in

Jackson (2003) that what Mary comes to do, when she first encounters coloured objects, is to enter into a variety of novel representational states (states representing there being a redness over there, and so on). However, there are no corresponding properties to ground these representations; there is no redness present either in objects or in experiences. Representation can be accounted for in broadly physicalist terms, and there is nothing else to account for. That what is represented (redness, say) does not really exist (according to Jackson) is not to the demerit of physicalism, as persons are able to misrepresent all sorts of things to themselves, beliefs, for instance, in the existence of fairies (assuming these are indeed false). All that needs accounting for, when Mary first encounters coloured objects, is that she starts to (mis)represent to herself in various consistent ways and gains the ability to recognise and imagine these (mis)representations. This can all be explained by appeal to the resources of physicalism, and indeed are in principle *a priori* predictable from Mary's full stock of physical facts. I do not find this line of response particularly convincing. First, it seems to take the phenomenal aspect of experience insufficiently seriously. Secondly, it is questionable whether it is a legitimate move to try to analyse phenomenal experience in terms of mere appearance. Whilst it can be merely an appearance that some feature of the world has some quality, it cannot also be merely an appearance that some experiential event is merely an appearance, on pain of regress. (Because an instance of something appearing to somehow to someone is *itself* an experiential event, with its own qualities—see Strawson 2008a pp. 40-41).

Despite Jackson's rejection of it, debate over the Knowledge Argument has continued, and so I shall examine a number of common responses to it below, before moving on to examine how accepting the Limit View of properties ought to lead one to respond to the argument.

9.1 Responding to the Argument: Part One

There are various ways one might respond to the argument from knowledge. One might question the truth of premise one; that it is in principle possible for someone in Mary's situation to be in possession of all the relevant physical information. One might deny premise two, holding that Mary knows *everything* relevant if she knows all the physical facts, and so does not learn anything new when exposed to coloured objects. One may also deny premise three; that is, accept that Mary in some sense learns something new, but

deny that this entails there being facts that are not physical facts (this is probably the most common sort of response).

Objections of the first kind can be found in Alter (1998) and Harman (1990). Alter (1998, pp. 50-51), notes that in order for the argument from knowledge to go through, an additional, and currently undefended premise, which asserts that all physical facts can be learned discursively needs to be assumed. Without this assumption, we cannot be confident in our assertion that Mary can indeed know all the relevant physical facts prior to her exposure to coloured objects. So, even if she learns something new when she first encounters coloured objects, there may be no reason to suppose that this new thing learnt is some non-physical fact. It ought to be noted that there is no inconsistency between holding physicalism to be true and denying that all physical facts can be learnt discursively. Harman (1990, pp. 44-45) claims that there are certain functional facts, facts about the functional role played by certain concepts, such as the concept of something's being red, which someone in Mary's position cannot possibly know. It is these facts Mary learns when she is first exposed to coloured objects. If functional facts are taken to fall under the purview of physical facts, then Mary cannot know all the relevant physical facts prior to her exposure to coloured objects. Thus, even though she learns something new when she first encounters coloured objects this new thing learnt is argued to be simply some functional, and so physical, fact.

Dennett (1991) puts forward an objection of the second sort. He first points out that one needs to proceed with caution in conducting this thought experiment. What premise one demands of us is not something readily imaginable. Someone who is in possession of all the relevant physical facts that anyone today possesses (and this, it is suggested, is the mental image of Mary conjured up by those who accept the Knowledge Argument's intuitive force) has only "a drop in the bucket" (*ibid.*, p.399) compared to someone who possesses *all* the physical facts. He suggests that anyone truly in Mary's situation; anyone in the very difficult to conceive of situation of being in possession of *all* the relevant physical facts, might indeed learn nothing new when exposed to coloured objects for the first time. Dennett concedes that his response does not get anywhere near to proving that they *would not* learn anything new, but importantly, it establishes that the Mary thought experiment does not get anywhere near to proving that they *would*, it "simply pumps the intuition" (*ibid.*, p.400) by insisting that something which is not anywhere near to being obvious (what things would be like for a being in possession of all the relevant physical facts) is in fact obvious. If Dennett is right, and no clear intuition can

be extracted from the Mary thought experiment, then the Knowledge Argument does not get off the ground, as we have no more reason to assert premise two than we have to deny it. A very similar response can also be found in Churchland (1985).

Responses of the third kind, that accept that when Mary is first exposed to coloured objects she learns something new, but that deny that this entails the existence of any facts that are not physical facts—that is, that deny premise three—are perhaps the most common. They come in a variety of forms. One way of expanding upon this sort of response is to claim that what is learnt by Mary is not factual, and so her learning something new poses no challenge to the physicalist claim that all facts are physical facts. Lewis (1983a) and (1988) and Nemirow (1990) and (2007) both respond to the argument from knowledge with the claim that what is gained by Mary when she is first exposed to coloured objects is not some item of non-physical factual knowledge, entailing a corresponding physical fact, but rather a set of abilities to recognise, imagine and predict ones behaviour in relation to coloured objects and experiences of coloured objects (Lewis 1983a, p.131) or to be able to imagine what it is like to have such an experience (Nemirow, 1990, p.495). Although Mary has previously lacked such abilities, this is not a threat to physicalism if one can accept that acquiring the abilities, whilst it requires something more than knowledge of all relevant physical facts (if it did not, Mary would already have these abilities prior to her release), does not involve any further factual knowledge and does not entail anything that is itself resistant to a physicalist analysis.

Conee (1985, p.298) rejects the Lewis/Nemirow account on the grounds that Mary might learn something new—knowledge, say, of what blue things look like—without acquiring the abilities described above, and indeed, might have such abilities without that knowledge. The abilities which form the key part of the Lewis/Nemirow response to the argument from knowledge are, Conee claims, neither necessary nor sufficient to account for the new thing Mary learns. However, Conee puts forward a similar response to the argument to Lewis and Nemirow, but one that appeals to acquaintance rather than abilities (1994). Knowledge by acquaintance is to constitute a third form of knowledge, in contrast to both factual knowledge and know-how/ability (*ibid.*, p.136). The new thing that Mary learns, when she is first exposed to coloured objects, is some piece of knowledge by acquaintance (and perhaps also she gains some abilities), and such knowledge does not require the existence of some non-physical fact. For Conee, Mary becomes acquainted with a property of an experience, which we might call what-it-is-like-to-see-red, when she first encounters a red object. Prior to this, she only knew *that* visual experiences of red objects

have the property of what-it-is-like-to-see-red, and any other relevant (physical) facts. But this does not require that we posit any further non-physical facts. Thus, the Knowledge Argument's third premise can be denied: there is no reason to assert that just because Mary learns something new, there are some facts that are not physical facts.

A third way of formulating this sort of response to the Knowledge Argument is to claim that when Mary first encounters coloured objects, she does not learn any new fact, nor does she learn some non-factual thing (such as the how-to of an ability, or what it is to be acquainted with a particular property of an experience). Rather, she learns a fact she already knew in a novel manner. Such a response accommodates the intuitions that Mary learns something new when she is first exposed to coloured objects and that what she learns involves factual knowledge, what it denies is that this entails the existence of a new fact. This sort of response to the Knowledge Argument can be found in a number of philosophers' work, including, Horgan (1984); Tye (1986) and (1995); Bigelow and Pargetter (1990); Lycan (1990) and Papineau (2002) and (2007). There is not adequate space here to explore the subtle differences between the various formulations of these variants on this type of response, and so I restrict myself to outlining their common elements. According to these philosophers, when Mary first encounters coloured objects, what she gains are phenomenal concepts. These phenomenal concepts are necessary to knowing about certain properties of experiences: what-it-is-like-to-see-red type properties. Importantly, these properties are themselves physical, and what it is for a subject of experience to acquire and to have the relevant concepts can be captured without appeal to the non-physical. The only way to acquire these concepts is to undergo certain experiences. Whilst physical and phenomenal conceptualisations of experiences involve exactly the same facts, the two are in a certain sense independent of one another; that is, given one, there is no way to infer the other *a priori*. This independence explains why Mary, despite being in possession of all the relevant physical facts, will still learn something new when she is first exposed to coloured objects. However, what she learns will only be some of the physical facts she already knew presented under a phenomenal conceptualisation. Given this, there is no need to invoke non-physical facts in order to explain Mary's learning something new, and so premise three of the argument can be denied.

Nor is there space to enter into a detailed discussion of the merits and pitfalls of each of these responses to the argument from knowledge. Alter (1998) offers some arguments for the inadequacy of both the Lewis/Nemirow ability based response and the Conee acquaintance based response; suggesting neither provides an adequate account of

whatever new thing it is that Mary learns when first exposed to coloured objects. It has been argued that the claim that what Mary learns is merely a new way of understanding a (physical) fact that she already knew cannot be used by the physicalist, as this involves invoking some sort of non-physical property in order to fix the reference of phenomenal terms. (For an example of this sort of argument, see White (2007), and for a reply, see Block (2007)).

9.2 Responding to the Argument: Part Two

In this section I will put forward a response to the argument from knowledge which follows from the adoption of the Limit View account of properties. Before formulating the response, however, the conditions under which the argument could be taken to succeed need to be examined. The argument hopes to overturn a particular ontological position—physicalism—by establishing the existence of non-physical facts which are inconsistent with that position. Some attention needs to be paid to what sort of analysis we can give these; first, to the question of what facts in general are, and secondly to that of what it would take for them to be specifically non-physical.

A fact, I propose, is a way that the world is. A fact could be very precise and particular, concerning some miniscule detail of how the world is, or it could be quite general and complex. The ontology proposed in this thesis takes the world to be a world of objects, that is, propertied substances, and so a way the world is is a way that some object or objects are. Facts can capture the existence, the arrangement and the nature of object;- that is, they can capture which objects there are; the relations those objects bear to other objects and what properties those objects have. Perhaps facts can capture more than this, I certainly do not want to argue here that they could not, but equally cannot think of anything further that they might capture. Facts can be expressed in true statements, and so bear a certain relation to the truthmakers of those sentences. I do not take facts to be an ontological addition to the ways the world is that they capture. Consider a red, hot, chilli-pepper. In this example, "chilli-pepper" is the name of the object, and "red" and "hot" are names of two of its properties. Certain facts obtain regarding this chilli-pepper: the fact that it exists; the fact that it is red; the fact that it is hot, to name but a few. In order for these facts to obtain, nothing more is needed, I propose, than the chilli-pepper's instantiating the properties of red-ness and hot-ness. There need not be additional entities; the facts do not exist as entities alongside those things which they are the facts about.

Facts, if this analysis is acceptable, are often intimately tied to properties: they can obtain in virtue of something's instantiating some property, and what they capture is just that that thing does instantiate that property.

What might make a fact a physical or a non-physical fact?¹⁷² Some potential confusions need to be corrected at this point. First, if facts, as suggested above, are not entities alongside those that they obtain in virtue of, this cannot be a matter of some facts instantiating the property physical-ness and some facts lacking that property. Instantiating properties is what objects do. Objects are the entities which facts are *about*, and in virtue of which facts *obtain*; it would be a category mistake to treat facts as objects themselves. Secondly, on this analysis, a fact will not count as physical or non-physical just on the basis that it can be expressed in a true statement that involves physical or non-physical vocabulary. I propose that a fact will count as physical or non-physical in virtue of it being a fact about a physical or a non-physical object respectively. How might we draw this distinction at the level of objects? It seems there are two options on the table: objects might be physical or non-physical due to being made up of either physical or non-physical substance; or due to instantiating physical or non-physical properties. For the moment, I shall set aside the first of these options, the debate over which concerns substance monism and dualism, and consider the second, the debate over which concerns property monism and dualism, as the latter is the position the Knowledge Argument is most commonly taken to support.

We are now in a position to make explicit what the Knowledge Argument requires in order to establish its anti-physicalist conclusion. If, as the Knowledge Argument claims, Mary learns something new upon her release, that is, if premise two is correct, she learns something regarding previously unknown qualities. What she learns might be facts about the qualities of her own experiences, they might be facts about qualities of the objects she is experiencing for the first time, or they might be about both. I take it to be uncontroversial that facts about qualities, that is, facts about the qualitative ways that some object is or some objects are, whatever the objects concerned happen to be, obtain in virtue of the properties that that object instantiates. For the Knowledge Argument to go through then, we need a good reason to think that the properties in virtue of which these

¹⁷² I am again, for now, going to dodge here the thorny issue of what makes anything physical or non-physical, and work under the assumption, present in the debate regarding the ontology of mind and body, that there is at least in principle a well founded and philosophically significant distinction here.

newly learned facts obtain are properties that previously Mary had no knowledge of; that is, they are properties that cannot be in some sense characterised as physical.

The account of properties put forward in this thesis holds that all properties make both a dispositional and a qualitative contribution to the object that bears them. Thus, in virtue of possessing a particular set of properties, facts about both the qualitative ways and the dispositional ways that an object is will obtain. But these facts obtain in virtue of the very same set of properties. On this view, when Mary learns a fact about the qualities of some object, she is learning a fact about the contribution made to that object by the set of properties it instantiates; although the fact she learns does not capture everything about that contribution. It does not capture, for instance, the dispositional contribution made to the object by the very same set of properties.

In the previous section of this chapter, in examining the Argument from Conceivability, the notions of dispositionality and qualitativity were tentatively aligned to those of the physical and the qualities of conscious experience respectively.¹⁷³ This sort of characterisation seems to garner support from the quotation from Jackson via which I first introduced this argument. There he speaks of Mary's knowledge prior to her encountering any coloured objects as consisting in knowledge of "[...] *what goes on* when we see[...] which wave-lengths[...] *stimulate* the retina, and exactly *how this produces* [...] the *contraction* of the vocal chords and the *expulsion* of air[...]" (Jackson, 1982, p.130—my italics and liberal cutting). His focus, in giving an account of what Mary knows about prior to her release, is on causal-cum-dispositional processes. In the idiom set out above, that is to say that prior to being exposed to coloured objects in normal conditions, Mary has knowledge of facts about the dispositional ways that objects are, facts that obtain in virtue of the set of properties that those objects instantiate. Importantly, there does not seem to be a principled way to deny to Mary full knowledge of dispositionality prior to her first colour experiences (regardless of whether or not 'the dispositional' and 'the physical' are

¹⁷³ It should be noted that one does not want to align these with the physical and the mental in general, as one does not want to exclude mental properties from causal efficacy. So we might rather say that we align the notions of dispositionality and qualitativity to the physical-and-some-mental-states (perhaps this is best termed simply the 'non-phenomenal') and the qualities of conscious experience respectively. Crane (2001, section 28) makes the interesting, related point that the knowledge argument can be construed as not just having physicalism in its sights, but any theory of mind which accepts that Mary can learn all its facts prior to her experience; be it dualist, emergentist or whatever. Lewis makes a similar point: the "intuitive starting point wasn't just that *physics* lessons couldn't help the inexperienced to know what it is like [to see colours etc.]. It was that *lessons* couldn't help." (1990, p.281).

well aligned), as what it is argued she gains knowledge of is *what it is like* to see colours, and this sounds paradigmatically qualitative.

If the physical facts are these facts, as Chalmers holds (see section 8.4) and Jackson implies, then premise one entails that Mary knows *all* the dispositional facts; that is, she knows all the facts concerning the dispositional contributions made to the objects by the properties that they instantiate. Do any of the properties fail to get in on this act? No. Remember that on the ontology proposed, *all* properties contribute to the dispositional ways that their bearer's are. So, if physical knowledge is dispositional knowledge; that is, knowledge of facts which obtain in virtue of the instantiation of properties which contribute to the dispositional ways that their bearer is, then *every* property of the object(s) concerned will be a property that Mary has some knowledge of. Another way of putting this is that given the set of facts that Mary knows before her encountering coloured objects for the first time, every property of those objects will play some role in the obtaining of those facts. Thus, it is not open to the proponent of the Knowledge Argument to hold that there are two classes of property: mental (or phenomenal), and physical, which each contribute to their bearers in distinctive dispositional and qualitative ways, the latter of which Mary has no knowledge of prior to experiencing coloured objects for the first time, and the former of which she had full knowledge of prior to this. If the Limit View, and the alignment of the notions of the non-phenomenal and the dispositional is correct, then it must be accepted that Mary has knowledge concerning—knowledge of facts which obtain in virtue of—all the properties of the objects in question prior to her first colour experiences. The only other option is to abandon premise one, which would be to abandon the argument.

The significance of this for the knowledge argument is that accepting that Mary has no knowledge of the qualitative nature of things prior to her release, and even accepting that the new knowledge she gains is *factual* knowledge, does not force one to accept an ontology which posits a second type of property—mental properties—in virtue of which the newly learned facts obtain. The epistemological route to ontological conclusions on which the Knowledge Argument turns has been blocked. What Mary learns are facts about the qualitative contribution made to the way the object concerned is by the properties that it instantiates, but these properties *are the very same properties* as those which, if premise one is taken seriously, Mary already has knowledge concerning. If no new properties are required to provide the basis for the new facts that Mary learns, if these facts obtain in virtue of the very same properties that Mary already has knowledge of, then the proponent

of the argument cannot use it to draw the sort of ontological conclusions necessary to motivate property dualism.¹⁷⁴

This sort of response is uniquely available to the proponent of the approach to the ontology of properties put forward in this thesis. Consider briefly the other major candidate ontologies with regards to properties: categoricism; dispositionalism and a mixed view. Categoricism holds that the basic properties are non-dispositional, and that dispositions are contingently realised by their categorical bases. Thus, full knowledge of facts which obtain in virtue of an objects having certain dispositions obtain in virtue of contingently realised properties, which the facts that obtain in virtue of the categorical properties of objects do so due to the intrinsic properties of those objects. On this account of properties, what the Knowledge Argument needs to get from its epistemological premise to its ontological conclusion—that some properties might fail to get in on the act regarding the facts Mary knows prior to her first colour experiences—is entirely plausible. Dispositionalists do not face this issue, but they face another. If they accept the proposed characterisation of the non-phenomenal as the dispositional, then they are forced to claim that there are no phenomenal properties, and that Mary would, with full dispositional knowledge, know what it is like to experience colour before she ever does so: essentially, this is Dennett's response (1991) plus the claim, which he backs away from, that indeed Mary *could not* learn anything new. Perhaps this response is correct, but it is unlikely to be one that would faze the proponent of the Knowledge Argument. Alternatively, they could reject this characterisation and, in order to maintain the intuition that Mary might learn something new, accept that not all the relevant dispositional properties (and thus not all the relevant properties full stop) get in on the act regarding what Mary knows prior to her first colour experiences; but this then paves the ground for the dualist conclusions of the Knowledge Argument, and so will not be acceptable to the dispositionalist who also wants to hold to a monistic ontology such as physicalism. It should be clear why the mixed view, that there are fundamental properties which are pure dispositions and which are pure qualities, is almost tailor made for the conclusions of the Knowledge Argument that there might be a dualism involving phenomenal and non-phenomenal properties.

¹⁷⁴ This is not to say that someone in Mary's position necessarily *would not* have any qualitative knowledge. Perhaps she would. Like Dennett, I find it hard to have a strong intuition regarding this thought experiment. However, the response given to the Knowledge Argument above is all the stronger for being able to grant to the proponent of the argument the premise that she would not have such knowledge.

In the discussion of facts above, I claimed that what would make a fact a physical fact would be its obtaining in virtue of the instantiation of a physical property, what would make it non-physical would be its obtaining in virtue of the instantiation of a non-physical property. The response I have given to the Knowledge Argument contends that the very same properties are involved in the obtaining of the facts Mary knows pre- and post- her first colour experience. How then should we characterise these two sets of facts? If the properties involved in the obtaining of the facts Mary knows before her release are *best* characterised as physical properties, then it seems that all the facts will be physical, as they all obtain in virtue of these very properties. What it means for a property to be best characterised as physical is the focus of the next chapter; and further discussion of how properties as conceived under the Limit View are best characterised will occupy what remains of this thesis. A monistic account of property can accommodate the intuitions at play in motivating the Knowledge Argument, and this is enough to demonstrate that the argument does not support dualism. The lesson a physicalist will take from this, I am sure, is that all the properties, and thus all the facts, are physical facts. My suspicion is that the dualist, rather than being convinced to abandon dualism by the considerations raised in this section, will look elsewhere for an argument, or else want to deny the ontology that this response is predicated upon; although like the proponent of the Argument from Conceivability, she will need independent grounds upon which to do so.

We have seen that even given that Mary learns something new upon first encountering coloured objects, this does not motivate the positing of distinct types of property, some physical, some mental. Rather, the approach to the ontology of properties set out in this thesis allows for the intuition that some facts might only be learnable through distinctive kinds of experience, experience which cannot, as Lewis (1990) puts it, be had from lessons, whilst recognising that the properties in virtue of which these facts obtain are the very same set of properties which underpin the lesson-learned facts. Where does this approach to the issues which arise from the Knowledge Argument leave us with regard to the ontology of mind and body? In this chapter and the last, I have argued that it does not favour a property dualist response to the problem, but not yet put forward any positive account. The final chapter of this thesis will be concerned with outlining how, if one accepts the account of properties set forward in this thesis, the relationship between mind and body should be conceived. This work will be largely programmatic, as there is simply not space here to give a detailed account.

9.3 Explanatory Gaps

Both the argument from conceivability and the zombie argument attempt to move from certain epistemological premises to the conclusion that a certain ontological position, physicalism, is false. Another argument which adopts this same sort of strategy exploits what is usually known as the explanatory gap. The driving intuition behind explanatory gap arguments is that it is hard to see how physical information can *explain* why there is phenomenal consciousness in general, and why there is the specific sorts of phenomenal consciousness that there happens to be. Often, the notion of explanation being deployed is intimately tied with that of deduction: the gap is motivated by the claim that we cannot *deduce* from the physical state of the world either *that* there will be phenomenal consciousness or *what* any phenomenal consciousness that there is will be like (see, for instance, Chalmers (2010, p.307) or Levine (1993, p.550)). The move is then to make an inference from this claim to an ontological gap. As Chalmers' puts it "if we cannot explain consciousness in terms of physical processes, then consciousness cannot be a physical process" (2010, p.307), and so physicalism must be false. If the additional premise is held, that if physicalism is false, then some form of dualism is true, then arguments from the explanatory gap provide direct support for a dualistic account of the ontology of mind and body.

The argument could be formulated as below:

- (P1) No physical explanation can be given for why conscious experience is as it is;
- (P2) If no physical explanation can be given for why conscious experience is as it is, then physicalism is false;
- (C1) Physicalism is false.

As before, if this argument is intended to lend direct positive support to a dualistic account of the ontology of mind and body, then an additional premise and conclusion need to be added:

- (P3) If physicalism is false, then dualism is true;
- (C2) Dualism is true.

I am not going to spend as much time examining the explanatory gap as I have the other arguments against physicalism, as I believe there are reasons for rejecting it which are independent of considerations of the correct ontological account of properties, which is the focus of this thesis. First, I agree with Heil that whilst there is clearly an explanatory gap

between current physics and phenomenal consciousness, it is not clear that the burden of proof lies with the physicalist to prove that it can in principle be bridged any more than it lies with the dualist to prove that it cannot; the possibility of closing the gap may be something we simply have to be epistemically humble about (2003, p.236). This line of response brings into question the assertability of premise one, without which the argument fails. Secondly, Crane (2001) has questioned the link asserted by premise two between what he calls physicalism's explanatory adequacy and its truth, arguing that there is no reason why one has to accept that the truth of physicalism as an ontological thesis ought to be dependent on whether or not it is explanatorily adequate, suggesting instead that ontological and causal adequacy suffice (the theses that there are no non-physical entities and no non-redundant, non-physical causes, respectively). This line of response brings into question premise two, without which the argument also fails. Thirdly, as Crane also points out, the first premise plausibly relies on a particular notion of explanation—one which is, as noted above, tied to deduction—which is often assumed by proponents of explanatory gap arguments. It is open to the defender of a monistic ontology to reject the notion that this is the sort of explanation they need to be able to provide, and suggest instead another notion of explanation, perhaps causal, is both closer to the usual sense in which the term is meant and less likely to be compatible with premise one (*ibid.*). Furthermore, even if one accepts that the 'deductive' notion of explanation at play in the explanatory gap argument is the correct one, Heil argues that "[...]the lack of an analytical or definitional connection among two kinds of concepts cuts no ice ontologically" (2003, p.236).¹⁷⁵

I am sympathetic to these responses to explanatory gaps arguments, and take them together to seriously undermine the force of such arguments.

I have suggested above that we may be able to align claims about the physical with those about the dispositional contributions properties make to the objects that bear them, and that claims about conscious experience may bear a special relationship to the qualitative contributions properties make to the objects that bear them. Before moving on from looking at explanatory gap arguments to examine this suggestion in more detail,

¹⁷⁵ Martin expresses a similar idea, although perhaps less clearly, when he states that "[d]ifferent kinds of explanation are not 'reducible' (that is, by entailment or translation) to one kind of explanation, although the items and happenings mentioned in different kinds of explanation could be *ontologically* reducible, that is, come *down* to (be nothing over and above) the same items and happenings mentioned in that explanation[...]. Explanations are mind-dependent, theory-laden, and interest relative. None of this applies to objects or events *themselves* and how they are constituted[...]" (2008, p.132).

which shall be the business of the next chapter, it may be useful to examine the explanatory gap argument outlined above in light of this suggestion. The claim of the first premise would then be that no explanation in purely dispositional terms could account for the qualitative features of conscious experience, and the second that, if this is the case, then physicalism is false. The explanatory gap becomes one between the dispositional and the qualitative. The first premise, under this interpretation, is plausible. If the account of properties put forward in this thesis is correct then we should not expect that the dispositional will explain the qualitative, for there is no direction of priority between the two, all properties are best conceived of dispositional-cum-qualitative and qualitative-cum-dispositional. Can we draw the ontological conclusions from this that stem from the second premise of the argument? It seems at the very least questionable that we could. Even if it is established that there might be, in principle, no way of bridging the explanatory divide between the dispositional contributions properties make to their bearers (which I have suggested broadly speaking aligns with the physical) and the qualitative contributions properties make to their bearers (which I have suggested bear some important relation to phenomenal consciousness), this will not establish that a monistic ontology is false, for these contributions are made by one and the same property. The explanatory gap need not be attended by an ontological one, for both the dispositional and the qualitative features of objects are accounted for by the very same set of properties. The claim that dispositions are identical to qualities, and vice versa, bridges the ontological gap which is the conclusion of the explanatory gap argument. One might wonder whether it provides the elusive bridge which crosses the explanatory gap itself? It is not clear to me that it does so; the identity claim at work here will not serve an explanatory role, as it is not a reductive claim. As discussed in Chapter Three of this thesis, there is no direction of priority between the dispositional and the qualitative. However, that the Limit View provides an ontological, but not an epistemic bridge, should not damage the *ontological* credibility of that view.

As has been seen over the course of this chapter and the last, adopting the Limit View allows one to give responses to arguments in favour of property dualism, and thus to maintain a monistic ontology of mind and body. However, it has not yet been established whether this ontology is a variant of physicalism, idealism, phenomenalism or some other monism. The next two chapters will examine what it means for an entity to be best characterised as physical or mental. On the basis of the characterisations advanced in these chapters, I will argue that if one adopts the Limit View, the position one should occupy concerning the ontology of mind and body is a variant of neutral monism.

Chapter Ten: Characterising the Physical

So far in the second half of this thesis we have examined arguments which are supposed to militate against physicalism in favour of (most commonly) property dualism—the claim that the apparent distinction between mental and physical phenomena is a genuine ontological distinction, one that is to be accounted for in terms of two fundamentally different kinds of properties. We have seen how adopting the Limit View of properties undermines these arguments. A proponent of a monistic account of the ontology of the physical and the mental can, therefore, meet the challenges laid down by the (property) dualist if they choose to adopt such an account of properties. In this chapter, I shall explore the positive ramifications of adopting this account, focussing on particular on what type of monism fits best with the adoption of the Limit View account of properties. First, I shall examine in more depth an issue that so far I have deferred: the question of how best to characterise both the physical and the mental. Following this will be an overview of the conceptual landscape which the various approaches to the ontology of mind and body define. I shall argue that the territory most comfortably occupied in this landscape by the theorist who adopts the Limit View is that of neutral monism. In the final section of this chapter I develop in greater detail the consequences of adopting a neutral monism alongside the Limit View for a theory of mind.

10.1 Characterisations of the Physical and the Mental

In the preceding chapters I have proceeded without giving any precise characterisation of either the 'physical' or the 'mental', noting simply that we do seem to be able to draw a *prima facie* distinction between putative phenomena answering to each of these types. Where I have addressed the work of others (for instance Chalmers and Jackson) where they do offer or suggest a characterisation of some such distinction (in these cases, one broadly along the lines of the 'physical' relating to the dispositional and the 'mental', or some important aspect of the mental, to the phenomenal or qualitative), I have adopted their characterisation. In this section, I shall offer a brief survey of ways of characterising the distinction between the mental and the physical. Janice Dowell highlights this issue in her discussion of the debate surrounding the ontology of mind and body, stating that one of the core goals for any attempt to address this debate must be "[...]identifying a plausible answer to the question: 'what is it for a property, kind, or entity to be a physical one?'"

(2006b, pp. 54-55). This exploration shall lay the groundwork for my later claims that if one adopts the Limit View, then the appropriate accompanying view of the ontology of mind and body is that of neutral monism. Engaging in such an exploration is an important task, I believe, for any contribution to the debate concerning the ontology of mind and body, but this importance is particularly keenly felt if one wishes to advance a neutral monism. The reason for this is that, whilst we might be thought to have a reasonable pre-critical, intuitive grasp of physicality and mentality, the same cannot be maintained regarding the neutrality which neutral monism holds applies to all fundamental entities. Thus, it is crucial that an explicit and developed account of physicality and mentality accompany any presentation of neutral monism. Without this, it is not possible to motivate the neutrality claim which is central to neutral monism. For these reasons, what follows will be a fairly lengthy examination of the notions of physicality and mentality, but I hope that, in the final chapter, where I advance a new variant of neutral monism, it will be clear that this lengthiness was necessary.

Before I proceed, there are a couple of issues which ought to be resolved. First, some might suggest, against what I have said above, that if one takes the physical-mental distinction not to be reflected in fundamental ontology (as any neutral monist will do), then no substantive attempt to characterise the distinction needs to be made (as Heil has done (2012, p.209)). To do so is incumbent only on those who wish to maintain that such a distinction is reflected in the way things are with the most fundamental constituents of reality. One reading of this suggestion would be that it is only dualists, of either the property or substance sort, who are required to do so. On this point I disagree. A substantive account of the distinction needs to be given by the proponent of *any* position in this debate, for it is only with reference to such an account that the physicalist can justify labelling her monism such, rather than, for instance, idealist; and, more crucially for my discussion here, that the neutral monist can distinguish herself as properly *neutral*, as upholding the view that the nature of the most ontologically fundamental constituents of reality are *neither* best characterised as physical *nor* as mental. Note that none of this entails that the characterisations we might give of the physical and the mental need to be exclusive of each other, or even that they need to be given in broadly homogenous terms; we might find that the mental is best characterised in a very different manner to the physical, and vice versa. To give substance to the claim that the fundamental constituents of reality are neither physical nor mental, we need at least a broad conception of what it would take for them to be one, or the other, or both. This in turn requires that we have

some informative characterisation of these two categories. It seems to me that it could only be on these grounds that one could maintain, as Heil does, and any neutral monist also should, that the distinction between the physical and mental is not a "real" one (*ibid.*).¹⁷⁶ Perhaps this is too strong, and given the specific content of his claim, Heil is correct that *he* need not give such account—nothing I say will turn on this, and so I am happy to remain neutral on this question—but certainly it seems to me that *some* monisms, including the position I advocate below, will be required to.

Secondly, the ontological framework within which I am working in this thesis is one of substance and property. Properties are the ways substances are, substances are what bear properties. Any way some substance is will be accounted for in terms of the properties that that substance bears. Simple objects are propertied-substances, and these are the most fundamental existents; properties taken as not borne by any substance; and substances taken as not bearing any properties are abstractions from objects. Complex objects are made up of relatively simpler ones, bottoming out in the simple objects. It seems there are, within this framework, (at least) four ways we might structure the question of how best to characterise 'physical' and 'mental':

(10.i) What does it mean for a simple object to be physical/mental?

(10.ii) What does it mean for a substance to be physical/mental?

(10.iii) What does it mean for a property to be physical/mental?

(10.iv) What does it mean for a complex object to be physical/mental?

It should be clear that (10.i) will only be answerable with reference to (10.ii) or (10.iii): all there is to simple objects is their being propertied-substances, their natures are exhausted by this, and so whatever it is about them that might make them physical or mental will be a found either in something about their substance-hood or their propertied-ness (or maybe both). Closely considering (10.ii), we can see that any answer given to it within this framework will have to make reference to (10.iii): substances are as they are just in virtue of the properties they instantiate, so whatever it is about the way some substance is that means it qualifies as 'physical' or 'mental' will be something to do with the particular properties it instantiates. This is not to say that a physical substance (if there were any such

¹⁷⁶ It should be noted at this point that Heil does not identify himself as a neutral monist, and I do not mean to foist that position upon him. Heil's position may be distinct from neutral monism, but any neutral monist will agree with his claim that there is not a distinction between the physical and the mental which operates at the fundamental level, ontologically speaking.

thing) would have to instantiate the property physical-ness (if there were any such property), or that a mental substance (if there were any such thing) would have to instantiate the property mental-ness (if there were any such property). To think this would be to endorse what Heil (2003, chapter 3) calls the picture theory, and such an approach has already been rejected elsewhere in this thesis (see section 1.4).¹⁷⁷ This leaves questions (10.iii) and (10.iv) on the table: what it might mean to characterise properties or complex objects as physical or mental.

One possible sort of answer to (10.iv) would be in reference to the simple objects of which it is composed, which would lead us in turn back to question (10.i), which, as we have seen above, eventually leaves us posing question (10.iii). Another sort of answer to question (10.iv) would appeal to features which we can only discuss by making reference to the complex whole; although this need not imply some sort of emergentism, as the truthmakers for statements regarding the whole may just be its simplest parts (see, for instance, Heil (2012, p.209)). This is the sort of answer given by Martin in his discussion of mentality which is summarised in section 7.1 of this thesis. In what follows, when discussing various approaches towards characterising 'physical' and 'mental', I shall distinguish between the sorts of answers that such approaches might give to questions (10.iii) and (10.iv). It should be noted at this point that there is no *a priori* reason to suppose that our best characterisations of these two concepts would necessarily answer both of these questions, nor to think that they would necessarily answer one but not the other; they might furnish us with answers to both, or to just one. Likewise, there is no *a priori* reason to suppose that each characterisation will be the same in this respect; we may find that some furnish us with answers to both, whilst the others only to one, or that they each furnish answers to one but not the other.

10.2 Appealing to Science

One approach to giving a characterisation of what it means for something to be physical makes appeal to the physical sciences. An entity counts as physical just in case it is the sort of entity that appears in the theories of physical science. Approaches of this sort come in two broad camps: those that make appeal to current scientific theories (Melnyck, for instance, proposes this sort of view, (1997)) and those that appeal to future, perhaps ideal,

¹⁷⁷ Other frameworks might afford alternative ways to answer question (10.ii); perhaps through an appeal to 'attributes', as in Cartesian Dualism, or Lowe's Non-Cartesian Substance Dualism (2006).

science (see for instance Dowell (2006a) and (2006b), or Poland (1994)). One criticism of such an approach, when it is combined with physicalism, is that it faces what is sometimes known as Hempel's dilemma (1969). In brief, the dilemma runs as follows: if we choose the first option, the result is that physicalism seems likely to be false, as it is unlikely to be the case that just those entities compassed by contemporary physics exist. The second horn, in appealing to ideal physics, is thought to leave physicalism as trivial, insofar as 'future, ideal physics' is taken to mean something along the lines of 'whatever theory actually captures all of what there *really* is'. Furthermore, the second approach seems to lack the level of specificity and determinateness that is required in order for such a characterisation to be informative; we are told nothing of the nature of such entities except that an ideal theory of the world's fundamental constituents will include them. In what follows, whilst I shall be considering characterisations of the physical that have developed in the body of literature that responds to this dilemma, I shall not be too deeply concerned with how successful such characterisations are in meeting the challenge laid down insofar as the proper formulation of physicalism is concerned, as it is not this doctrine that I am trying to maintain.

Although I am not trying to defend physicalism here, Hempel's dilemma does highlight some important issues regarding the characterisation of the physical. Consider the first horn. The object of our inquiry in this section is to explore characterisations of the physical that will be useful and informative with regards to the question of whether or not the fundamental components of reality are such that they should be characterised as physical. If we take 'physical' to apply just those entities that appear in our current physical sciences, then the answer to this question is most likely that they are not. But this answer should not be satisfying in terms of the current inquiry, as the reason behind it is not some insight into the ontological nature of either physicality or of the fundamental constituents of reality. Rather, it simply stems from a reasonable epistemic humility that admits that our current scientific account of the world we inhabit is unlikely to be a completed, ideal one. Melnyck (1997—see p.625 for a summary) offers an interesting argument to try and blunt the point of the first horn of Hempel's dilemma. Regardless of the success of this argument in terms of defending physicalism (I shall remain neutral on how successful Melnyck's argument is), it does not make any difference to what I have said with regards to the limits of this sort of characterisation in the context of our present inquiry, as it revolves around considerations regarding the sort of attitudes we take in theory selection, and such

considerations are not pertinent to inquiries that are ontological in nature, such as the one at hand.

The second approach is to take the physical to be characterised by those entities that are compassed in a completed, ideal physics. The worry here is that this characterisation renders the thesis of physicalism trivial; and, is insufficiently determinate and specific with regards to the nature of the physical, rendering the characterisation uninformative. Again, these problems seem to apply not just in the case of the defence of physicalism, but also for our present inquiry. The question at hand, whether or not the fundamental components of reality are such that they should be characterised as physical, will, under a future-science based approach to characterising the physical, be answered 'yes'. But once again, the answer is unsatisfying, as it stems from the stipulation that these fundamental components will all be accounted for in a completed, ideal physics. This answer fails to satisfy the needs of the present inquiry as *whatever* the ontological nature of the fundamental constituents of reality turn out to be, if the physical is characterised in this way, then they will qualify as physical, and conversely, what 'being physical' turns out to consist in just is having the nature that the fundamental constituents of reality have; essentially, the term 'physical' has been defined so as to be co-extensive with 'fundamental constituents of reality'.

Dowell (2006b) has proposed a version of this sort of account with additional constraints which are intended to mitigate the problem set out above. She holds that any account of what counts as physical must make reference to our best scientific theories, as we can always conceive of future developments in physics as defeating any non-science based characterisation. This idea is motivated by examples such as the move from a mechanistic conception of physics (in which we might take, say, deterministic behaviour and impenetrability as defining features of the physical) to modern physics; the discovery of phenomena that are treated within the physical sciences which lacked these features was not taken to be the discovery of non-physical phenomena, but reason to abandon such a characterisation (*ibid.*, pp. 32-33). Such considerations are taken by Dowell to generalise to *any* attempt to characterise the physical by appeal to definitive features. She lays out a characterisation of scientific theories in general, and adds an 'integration' requirement to the characterisation of 'physical'; in order to count as physical, the positing of an entity must not only be compatible with a pattern of explanation of the most fundamental constituents of reality, but must be well integrated into explanatory theories which bear the hallmarks of scientific theories (*ibid.*, pp. 38-39) and concern these fundamental

entities. In (2006a), she is also suggestive that a 'concreteness' constraint may be applicable, stating that "[T]o count as basic and physical, a property must be well integrated into the most complete and unified explanation possible for the relatively basic *occupants of space-time*," (p.6, my emphasis). Such constraints render this characterisation of the physical informative, Dowell, argues, because bearing them in mind we can understand what it would take for there to be entities that did not count as physical (2006b, pp. 36-38). For instance, should it turn out that our best ontological theorising requires miraculous events or Cartesian egos, then some entities are non-physical, as the former would not be well integrated into a pattern of scientific explanation, and the latter are non-spatio-temporal. She identifies exhibiting highly regular behaviour as crucial to integration (2006a, p.6).¹⁷⁸

Suppose we accept Dowell's characterisation. Being physical, for her, is something that is most properly predicated of the relatively basic entities, what I have termed 'simple objects' above. This given, it seems likely that question (10.iv), regarding complex objects, will be answered with reference to the simple objects that compose them; and a complex will count as physical just in case its component parts are all physical. As we saw above, this puts question (10.iii) centre stage. On Dowell's account, it seems a property will count as physical insofar as it either has a concrete instantiation and confers on its bearer dispositionalities, or falls under some law, which govern(s) its behaviour in a highly regular fashion. Note that this characterisation, whilst it might at first glance appear to favour a powers ontology of some form or another, does not necessarily do so: it is equally compatible with a categoricallist account of properties that holds that dispositional properties are in some sense grounded in non-dispositional one (see section 1.2 of this thesis for a discussion of this sort of position), just so long as the grounding properties will be required in order for the account to be complete and well integrated.¹⁷⁹ Unlike potential formulations considered above, this account of the physical does encode certain

¹⁷⁸ A relatively unrestricted version of a future-physics based account is offered by Poland (1994). However, the restricted version presented by Dowell appears to have a greater scope for overcoming the worries posed by Hempel's dilemma, and so it is on this version I shall concentrate. (See Crook and Gillett (2001) for a criticism of Poland's approach along these lines.)

¹⁷⁹ I do not intend to take a position on this question. However, if one accepts Dowell's account of the physical, plus physicalism itself, and it turned out that non-dispositional properties were not necessary for a complete and integrated scientific account of space-time's most basic occupants, then this might be seen as a good reason to reject non-dispositional properties.

ontological restrictions on what might be physical: only concrete, dispositional (or disposition granting) properties are in the running.

Jessica Wilson accepts something similar to Dowell's account with an additional proviso that the basic physical entities must not "[...]individually possess or bestow mentality[...]" (2006, p.61), where mentality is understood in terms of "[...]qualitative experience and intentionality[...]" (*ibid.*, p.69). Dowell, on the other hand, explicitly allows that fundamentally mental entities may just turn out to be physical; we ought not to decide *a priori* on the incompatibility of the mental and the physical, but rather this should be an *a posteriori* matter. If we hold that the mental and physical are incompatible, but do so *a posteriori*, then our characterisation of the physical (and of the mental) must allow for some way the incompatibility claim can be falsified by the world. In order to meet this demand, Dowell allows that mental entities might be well integrated into a pattern of explanation bearing the hallmarks of a scientific theory of the most basic occupants of space-time, and holds that should they do so, then they count as physical (2006b., pp. 43-45). There are, of course, ways that fundamentally mental properties could be that do not, on this account, count as physicalism: for instance, should they feature in our complete and ideal theory of the reality's most fundamental constituents and yet not be well integrated into the parts of that theory that bear the hallmarks of science. This given, Dowell should not be thought of as failing to respect the differences between physicalism and dualism in allowing that mental properties may just turn out to be physical.

It is important to recognise that what is at stake between Wilson and Dowell is not whether or not the world might turn out to be a certain way; a way in which entities that individually possess or bestow either qualitative experience or intentionality are well integrated into a pattern of explanation bearing the hallmarks of a scientific theory of the most basic occupants of space-time, but rather whether or not this way the world might be should count as one in which every entity is a physical entity. This disagreement is an important one for physicalists, as there is something genuine at stake for them: depending which view one sides with, one will give different answers regarding which ways a world could turn out to be count as *physicalist* ways. Both sides agree that a world with non-integrated fundamental mentality is a dualist world; both agree that a world with no fundamental mentality and no non-integrated fundamental properties is a physicalist world, but there is disagreement over whether or not the case between these, where there is well integrated fundamental mentality ought to count as physicalist or dualist. Seen in these lights, it is hard to see how we could definitively adjudicate between these rival

accounts. Wilson believes she has the edge, on the basis of historical and pragmatic considerations regarding our current pre-theoretic concept of what it is to be physical (2006, p.85 onwards); in favour of Dowell's proposal is the intuition that anything which can be well integrated into a particular scientific framework can justifiably be characterised as falling under the extension of the predicate which picks out the subject matter of that science. Neither supporting claim lacks appeal entirely, and perhaps how one is drawn on this question will largely come down to a matter of how much weight is given to certain intuitions. Luckily, for the purposes of the present inquiry, we need not settle the debate now, as nothing I say below will turn on this issue: the reasons to be given for holding that the Limit View is best situated within a neutrally monist ontology are not sensitive to whether or not physicality and mentality are fundamentally incompatible with one another.

10.3 Paradigm Physical Objects

Another approach to characterising the physical, proposed by Daniel Stoljar, is by reference to paradigm physical objects:

"[...]a physical property is a property which either is the sort of property required by a complete account of the intrinsic nature of paradigmatic physical objects and their constituents or else is a property which metaphysically (or logically) supervenes on the sort of property required by a complete account of the intrinsic nature of paradigmatic physical objects and their constituents. According to this conception, for example, if rocks, trees, planets and so on are paradigmatic physical objects, then the property of being a rock, tree or planet is a physical property. Similarly, if the property of having mass is required in a complete account of the intrinsic nature of physical objects and their constituents, then having mass is a physical property." (2001(a), p. 257—see also 2001(b))

Stoljar calls this the object-based conception of the physical, and it is to be contrasted with the theory-based conception, which broadly aligns with the sort of characterisation discussed above, one which draws on the physical theory in characterising the physical. Stoljar's object-based conception, given the quotation above, matches up truly applicable predicates to properties relatively unrestrictedly, which, as discussed in section 1.4 of this thesis, is an approach to identifying properties which ought to be rejected. However, the spirit of the account can be maintained without adopting such an abundant theory of properties, applying it rather to a relatively sparse conception. On this account, as I understand it, we select some sample of what are *prima facie* non-controversial examples

of entities we take to fall under the extension of 'physical': complex objects, it seems, like rocks, trees and planets.¹⁸⁰ Whatever properties are required to give a full account of the intrinsic nature of these paradigms (whether on a sparse or an abundant conception) make up our set of physical properties. We can then assess non-paradigm cases in contrast with this set. Should it turn out that some *prima facie* non-paradigmatically-physical object (some object that is, say, *prima facie* mental) instantiates only properties from within that set, then, despite initial appearances, that object counts as physical. Physicalism will be true just in case all objects are either paradigmatically physical or turn out to be physical by lights of the procedure outlined above. Another way to express this is that physicalism will be true if all real properties are members of the set of properties required to give a full account of the intrinsic nature of paradigm physical objects.

If we were to adopt the object-based conception of the physical that Stoljar proposes, we would again find that answers to questions of types (10.i) and (10.iv) in the end defer to answers to questions of type (10.iii): properties again take centre stage. The answer to question (10.iii) will hold that a property counts as physical if and only if it is the case that it is a member of the set of properties that are required to give a full account of the intrinsic nature of the members of the set of paradigm physical objects, or is a property that logically or metaphysically supervenes on such properties. Before proceeding, there are a number of issues that need clarification. First, some might be concerned that such an account is insufficiently ontologically serious. Why should our ontology depend on our accounts of things? Whilst I agree that there is a reading of this conception that falls foul of such a worry, I think an ontologically serious reading can also be given, insofar as we can make sense of 'giving a full account' as meaning something along the lines of 'listing all the real properties of'. In this spirit, a property is physical just in case it is a member the set of real properties of the members of the set of paradigm physical objects. Secondly, this account seems to assume properties are universals, shared by multiple objects. However, it ought to be clear to the reader that an analogous account, in which properties are considered particulars can be fairly straightforwardly given appealing to exactly resembling classes of properties. Finally, on a sparse theory of properties, it might be questioned whether or not there are any real *properties* that logically or metaphysically supervene on any other properties. If it is held that there are not any, this does not pose any real

¹⁸⁰ Perhaps these examples are not uncontroversial, but let's suppose they are, for the sake of illustration. Maybe someone who took biological kinds ontologically seriously would say trees are paradigmatically biological rather than physical.

problem for the account, as the second disjunct in the characterisation of the physical given above is merely redundant, and so this is an issue on which we can remain neutral.

Whilst I do think that Stoljar's position can be defended against all of the worries (very briefly) outlined above, I do not think that we should adopt his object-conception of the physical. What appears to me to be an insurmountable problem arises for this conception when we consider a particular sort of emergence. Genuine substantial emergence occurs, not when certain configurations of relatively 'low level' entities bring into being some novel, relatively 'high level' entities (as, for instance, when it is suggested that mental states emerge from complex physical ones), but rather when certain mutual manifestations of reciprocal disposition partners involve the coming into being of some novel substance with novel properties. There is no need, in the case of genuine substantial emergence, to appeal to any conception of reality as being layered; it is uni-layered emergence, or perhaps better yet, simply un-layered emergence. (See Martin 2008 (pp. 130-131) and Heil (2012, pp. 26-31) for further discussion of the possibility of this sort of emergence.) Perhaps genuine substantial emergence is the sort of thing that occurs in particle accelerators, or maybe it happened during the big bang. At any rate, even if it does not/did not happen in either of these very particular environments there does not seem to be any compelling reason to deny the possibility of genuine substantial emergence *a priori*. The problem for the object-based conception of the physical is that it entails that any novel property which comes into being as a result of genuine substantial emergence cannot be physical, as it will not (by dint of being novel) be a member of the set of real properties of members of the set of paradigm physical objects. An analogous problem can be run based on considerations of alien properties.

It does not seem that our account of the physical ought to rule out *a priori* the coming into being of new kinds of physical property. Indeed, if genuine substantial emergence might occur in particular circumstances in particle accelerators, as part of experiments done by physicists, whose results are to be integrated and assimilated into the body of our account of the relatively fundamental constituents of reality, it seems perverse to maintain an account which would rule out these involving novel physical properties. Considering genuine substantial emergence seems to lend considerable intuitive appeal to a conception of the physical along the lines proposed by Dowell. In response to this problem the proponent of the object-based conception might suggest that were the novel substance suitably similar to existing paradigm physical objects, then it could be included into the set of paradigm physical objects and thus its properties would be introduced into

the set of physical properties. How could this response work? The only manner in which the emergent entity could be similar to anything else is in terms of the properties it instantiates, as these are the ways the entity is, in virtue of which it is similar or dissimilar to everything else. Its properties will not, *ex hypothesi*, be exactly similar to those of existing paradigm physical objects, or else they would not be novel. But perhaps they could be non-exactly similar (in the way, for instance, that red and orange are non-exactly similar to each other, and more so than either is to green). All properties are non-exactly similar to all other properties (apart from those that they are exactly similar to), although as the degree of non-exactness of this similarity increases, we tend towards talking of *dissimilarity*. If an appeal to non-exact similarity is going to be made by the proponent of the object-based conception in order to show that their account does not rule out emergent, novel properties in the sense described above, then they will need some criterion by which to judge how non-exactly similar an object needs to be to existing paradigm physical objects in order to be admitted to that set. But any criteria that could be given would presuppose some notion of physicality other than the object-based conception, and whatever this notion is, it seems it will be prior to the object-based conception itself.

Another issue appears as though it may plague this type of account. Let us assume that monism is true: all phenomena, despite *prima facie* heterogeneity, are fundamentally accounted for by one homogenous ontological kind of property, which we'll call the F-properties. Now suppose we adopt the object-based conception of the physical. We select our sample of paradigm physical objects, and investigate the properties which account for their intrinsic nature, and find out that they are the F-properties. So, we conclude that the F-properties are the physical properties, and go on to investigate the rest of reality to try to find out whether or not there are non-F-properties out there, or whether, if there are not, physicalism is true. As it turns out, given our initial assumption, there is nothing but the F-properties; so we conclude that physicalism is true. But what if we had started our investigation with some other kind? Say, we began by investigating paradigm aesthetic objects, armed with an object-based conception of the aesthetic. This would hold that the aesthetic properties were those that are required to give a full account of the intrinsic nature of paradigm aesthetic objects. What properties would these turn out to be? Given our assumption that everything is accounted for by the F-properties, this procedure would lead us to the conclusion that the F-properties are the aesthetic properties. As we extend our investigation, to the rest of reality to try to find out whether or not there are non-F-

properties out there, or whether, if there are not, 'aestheticalism' is true. As it turns out, given our initial assumption, there is nothing but the F-properties; and so we conclude that aestheticalism is true. The very same procedure that led us to believe in the first instance that everything (including the aesthetic) was physical leads us to the conclusion that everything (including the physical) is aesthetic. If the initial assumption—that all things are F-things—is correct, then *whatever* paradigm class of objects we start our investigation with, be they physical, aesthetic, moral, biological, chemical, mental—*whatever!*—we will end up concluding the truth of that -alism. It seems adopting an object-based conception of the physical, unless we rule out doing likewise for the aesthetic, the mental etc., runs the risk of dissolving the boundaries between different accounts of the fundamental nature of reality.

The object-based conception faces major problems regarding the manner in which it will treat properties of genuinely emergent novel substance. Furthermore, if monism is true, then the procedure by which the object-conception operates cannot tell us anything substantive about the fundamental nature of reality. It lacks the resources to distinguish between physicalism, panpsychism, idealism, aestheticalism, biologism and so on. Perhaps these problems can be overcome by reference to some other notion of the physical, such as the science/theory-based conception, but if so, it seems such a notion is prior to the object-based conception, and we are better concerning ourselves with that prior notion. This given, I shall not discuss the object-based conception any further.

10.4 The *Via Negativa*

A fourth approach to characterising the distinction between the physical and the mental is the *via negativa*; simply defining the physical as the non-mental (in Chapter Two a number of similar approaches to characterising the distinction between dispositionality and qualitativity were examined). Vicente characterises the general strategy of the *via negativa* as follows:

This maneuver consists of defining the physical negatively, that is, by contrasting it against a class of entities that is better defined. The class in question is the class of mental entities. We may not know which physical entities there are, or what it is to be a physical entity, but we are on safer ground as regards what constitutes the mental domain, such as beliefs, desires, qualia, etc. (2011, p.397)

This approach is endorsed by, for instance, Papineau:

[I]t isn't crucial that you know exactly what a complete physics would include. Much more important is to know what it won't include... the sentient, say, or the intentional[...] (2001, p.12)¹⁸¹

It should be clear how answers to questions such as (10.i)-(10.iv) will be formulated given this characterisation of the physical: something will count as physical just so long as it is not mental. The *via negativa* approach to characterising the physical relies on the idea that we can give an informative and substantive characterisation of the mental, in order that this act as a contrast class for the physical. It is worth noting that it might be claimed that this is not as straightforward as the proponent of the *via negativa* hopes, or that we are in no better position to characterise the mental than the physical. In the following section we shall be considering various accounts of how the mental should be characterised, and so I shall postpone discussion of the viability of giving a characterisation of the mental until then, and, insofar as the *via negativa* is concerned, proceed with optimism on this front. Another criticism, raised by Vicente is that, if a *via negativa* approach to characterising the physical is to be adopted, then one will need to not only specify that the physical is the non-mental, but also, for instance "[...]non-astrological, non-biological, etc. [...]" (2001, p.398). The point is sharpened by the consideration that we do not have an exhaustive list of the classes against which the physical is to stand in contrast. One strategy that might be adopted is to make the claim that in all domains but the mental, we are in a position to give straightforward reductions from whatever given domain to the physical, and so we need not include these in our negative contrast class. This claim, however, will find far from universal support (see, for instance, Heil (2012, p.6) or Hendry (2010)).

Vicente's criticism certainly appears to have some weight, especially if what one is looking for from a characterisation of the physical is something that gives some account of the what would have to be the case, ontologically speaking, for something to count as physical (rather than, say, simply a way to separate the physical from the mental). I do not, however, intend to argue that it is an insurmountable issue; perhaps the proponent of the *via negativa* can produce a response which will avoid the criticism. I am happy to remain neutral on this question, as there is a more pressing reason why I do not think, at least insofar as the aims of the current inquiry are concerned, that one should characterise the physical negatively, via reference to the mental as a contrast class. The bigger problem is that, if we adopt the *via negativa*, no distinction can be drawn between physicalism and neutral monism. Prima facie, at least, there seems to be a difference between these two

¹⁸¹ See also Montero (2001).

ontologies, despite the fact that they agree that fundamentally speaking, everything is such that it is best characterised as non-mental. They disagree in that the former goes further than this, by saying that as well as being best characterised as non-mental, the fundamental entities are best characterised as physical; the latter that they are neither best characterised as mental nor physical.¹⁸² According to the *via negativa* account, neutral monism does not even seem to be an intelligible position; its specification amounts to the claim that the fundamental entities are neither mental nor non-mental. But if these terms pick out two mutually exclusive, exhaustive classes, this cannot be, on pain of contradiction. Neutral monism, from the standpoint of the *via negativa*, seems to be committed to the fundamental entities being both not-mental and not-not-mental! This might, to some, seem to smack of a verbal dispute, but there is something substantive at stake. Suppose we accept this characterisation, and assume that *via negativa* physicalism is true. The question still arises: what is the nature of the fundamental constituents of reality? One answer that could be given to this would be in line with some substantive conception of the physical. Other potential answers would deny this, and offer some different characterisation. What I am calling 'neutral monism' would be one (or perhaps some subset of) the latter sort of answer. The former is, I think, more properly called physicalism.¹⁸³

Worley (2006) puts forward a slightly different formulation of the *via negativa* approach, characterising the distinction as below:

My suggestion, then, is that our basic conception of the physical is a dynamical one. Physical objects are those whose behavior is entirely due to the operation of (impersonal) forces. Objects move because they are pushed, or dropped, or otherwise caused to move by some force. But they don't move because they want to. Agents, on the other hand, are objects whose behavior can, at least in part, be

¹⁸² Some might think that no such distinction needs to be drawn. However, even if some physicalists might be happy with a characterisation of the physical that does not differentiate between physicalism and non-physicalist, neutral monism (because, I suppose, they see the definitive issue at stake as the denial of irreducible/fundamental/*sui generis* mentality), it ought to be clear that these are distinct positions (one which claims everything is fundamentally such that it is best characterised by some relatively substantive notion of the physical, say, Dowell's; and one which claims everything is fundamentally non-mental), whether one wants to *call* them both *physicalism* or not.

¹⁸³ Or perhaps not more properly. It does not really matter what we *call* these various answers to questions that arise when we consider the ontology of mind and body. What is important is that we are able to distinguish between these various answers based on the particular ontological nuances of each account.

explained in terms of their goals, desires, and other representational states. Agents do move because they want to. (*ibid.*, p.112)

she goes on to elaborate:

Photons may not have mass, and point particles may not have dimension, and waves in an aetherless world may be as different from particles as you like; but nonetheless, the behavior of photons and electrons and all the rest is to be explained in terms of impersonal forces, rather than because they have beliefs and desires. The same goes, of course, for tables and chairs and other ordinary examples of physical objects. (*ibid.*, pp. 112-113)

The physical, then, is characterised as that which, when we wish to offer an explanation of its behaviour, we need not resort to the ascription of intentional states. Worley's account then gives an answer to questions (10.i) and (10.iv): what it is for an object to be physical is for it to exhibit behaviour of a certain kind; behaviour that can be fully explained in terms of impersonal forces.¹⁸⁴ This version of the *via negativa* characterisation of the physical does not, however, seem to avoid the problems raised above. If 'impersonal force' is given a broad enough interpretation, then it seems that the problem outlined by Vicente's will arise for this account as much as for the standard *via negativa* account: surely we need to not only contrast the physical with that which demands explanation in terms of personal agency, but also that which demands astrological or biological (or whatever) explanation in order to account for its dynamic behaviour. A version of the second problem raised above also seems to arise for Worley's account. Again, no distinction can be drawn between physicalism and neutral monism, as that which requires postulating personal agency in order to account for its dynamic behaviour, and that which does not, seem to form two exhaustive, mutually exclusive classes, and both ontologies might agree that nothing requiring such a postulate should be part of our final ontology.

Further to these issues, another arises for Worley's account that does not for the usual specification of the *via negativa* characterisation of the physical. Her characterisation ties the distinction between the physical and the mental to explanation. But it is not clear that explanatory considerations ought to be taken to have ontological import. We may find non-intentional explanation the most felicitous (relative to certain interests etc.) regarding certain phenomena, but it is a further step to hold that these phenomena, *on the basis of our explanatory successes and failures*, do not *actually have* any intentional states (and

¹⁸⁴ Worley's approach, in this respect, is reminiscent of Dennett's work on the physical and intentional stances—see Dennett (1987).

likewise is true with regards to intentional explanation).¹⁸⁵ Some may be happy with a characterisation of the physical in these terms, but insofar as the current inquiry is concerned, we require something a little more ontologically serious. For these reasons, we should set aside attempts to characterise the physical negatively, in contrast to either the mental generally (as per the common *via negativa* account) or that which requires belief and desire attribution to account for its dynamic behaviour more specifically (as per Worley's account) in favour of a characterisation that maintains an ontologically serious attitude and preserves the distinction between neutrally monist and physicalist ontologies.

10.5 Dispositionality and the Physical

In previous chapters, we operated with a conception of the physical that was suggested in the works of the authors who put forward the Arguments from Conceivability and the Knowledge Argument. Chalmers explicitly, and Jackson implicitly, tied the notion of the physical to that of the dispositional (see Chapters Eight and Nine, respectively).¹⁸⁶ Let us re-examine this approach in light of the discussion above, especially insofar as it relates to the most satisfactory approach to characterising the physical that we have looked at so far: Dowell's restricted future-science based account. First, it seems that an account of the physical that aligns, at least to some relatively significant degree, the notion of the physical with that of the dispositional, lurks in the background of most of the accounts we have addressed so far. Dowell's account sees meeting the integration requirement as a matter of having properties that appropriately govern and regulate behaviour; which sounds very much like having dispositions. In Stoljar's discussion of the difference between a theory- and object-based conception of the physical, he holds that the properties that a theory-based conception will not incorporate are just the non-dispositional properties (2001, p.258), and hopes to use the object-based conception to extend the notion of the physical to non-dispositional properties (although, as we have seen, this approach faces some serious difficulties). He comments on the intimate relationship between physical theory and the dispositional, noting that an expression of this intimacy can be found in the works

¹⁸⁵ Of course, Dennett would disagree on this point; but to hold that to *be* intentional is just to be predictable via the ascription of intentional states is to adopt an ontologically light-weight approach from the outset.

¹⁸⁶ More recently in Jackson (2006), he has adopted a future physical sciences based characterisation, with the further addition that anything that is completely composed of physical entities also counts as physical.

of Russell; Blackburn; Ramsey; Carnap and Lewis (see references in Stoljar (2001, pp. 285-286)). Worley's particular version of the *via negativa* also seems to have intimate ties to dispositionality, reserving the notion of the mental for that whose dynamic behaviour can only be ascribed to certain sorts of causal process, those which are agent driven, and considering the physical to be that which exhibits dynamic behaviour of a certain kind, that is, to that which has a certain sort of dispositional nature.

Given the considerations above, I hold that the best characterisation of the physical is an interpretation of Dowell's restricted future science based account that incorporates the notion that the physical is intimately related to the dispositional. This would furnish an answer to question (10.iii) as below:

(P) A property is properly characterised as physical insofar as: (i) it is a property which is referred to in a (relatively complete) theory of the relatively fundamental elements of our universe; (ii) the theory in question bears the hallmarks of a scientific theory; (iii) it is a concrete entity and (iv) confers on its bearer a dispositional nature such that it's behaviour is highly regular allowing that this behaviour can be well integrated into the theory.

(P) meets the challenges of Hempel's dilemma. It is non-trivial as it allows us to see various ways in which a physicalism based around (P)—let's call this (P)-physicalism—could be false. One way is that some properties that meet all the other requirements of (P) could be non-dispositional, that is to say, our final theory of the relatively fundamental entities might include pure qualities or purely categorical properties that do not confer dispositions on their bearers.¹⁸⁷ Another way (P)-physicalism might be false is if all properties are disposition conferring, but some are not well integrated; for instance, they are the powers that allow angels to perform their miracles (or perhaps there might be some mental dispositions which cannot be well integrated; this would be an empirical, rather than metaphysical matter). A final way in which (P)-physicalism—taken as the claim that all the entities in the world are best characterised, fully and thoroughly, without omission of any substantive feature of their nature, (P)-physically—could be false is if there is more to a property than the features mentioned in (P), despite the relevant property meeting all the requirements set out by (P).¹⁸⁸ (P) is a desirable characterisation of the physical because it

¹⁸⁷ Which is not to say that no such properties *could* confer dispositions on their bearers—but rather that those that do would not falsify (P)-physicalism.

¹⁸⁸ There may be more ways for it to be false, but I hope that mentioning these three should be sufficient to make it clear that (P)-physicalism is not a trivial claim.

incorporates substantive ontological requirements: a property will only count as physical given certain features of its nature. It allows us to formulate answers to all of questions (10.i)-(10.iv) via the answer (P) gives to (10.iii). A substance is physical just in case all the properties it instantiates are (P)-physical; a simple object is physical just in case it is a substance instantiating only (P)-physical properties and a complex object is physical just in case it is entirely composed of simple objects meeting this requirement (and, furthermore, if it should have any emergent properties¹⁸⁹ then they must be (P)-physical. Finally, (P) allows us to draw a distinction between physicalism and neutral monism: if (P)-physicalism is false in the third way outlined above, and monism is true, then this opens up a conceptual space in which to conceive of neutral monism as opposed to both the truth of physicalism and dualism. The reader might come, at this point, to question whether, given what has been said thus far, neutral monism can be distinguished from idealism, phenomenism and panpsychism; monisms that hold that all entities are in some sense best characterised as mental. In the final chapter of this thesis I examine the variant of neutral monism that I advance alongside each of these positions, and provide arguments to support the claim that it can be adequately distinguished from them (see sections 12.4 and 12.7).

Characterisations of the physical based on current science such as Melnyck's may meet Hempel's dilemma, but are insufficiently ontologically serious for the current inquiry. The object-based characterisation suggested by Stoljar faces serious difficulties stemming from the possibility of genuine substantial emergence and from its inability to distinguish meaningfully between competing monistic -isms. The *via negativa* approach to characterising the physical lacks the resources to distinguish between physicalism and neutral monism; perhaps even to formulate the latter intelligibly. Insofar as we desire to draw such a distinction, we must reject the *via negativa* characterisation of the physical. The most appealing characterisation of the physical is a particular interpretation of Dowell's restricted future-science based account; as expressed by (P). This satisfies three important desiderata: as shown above, it can be used to formulate a non-trivial physicalism; it incorporates substantive ontological considerations and is sensitive to the distinction between physicalism and neutral monism.

¹⁸⁹ If there really are such things. I am sceptical that there are.

In this chapter I have argued that (P) represents the best characterisation of what it means for something to be physical. In the next chapter I examine how the mental is best characterised.

Chapter Eleven: Characterising the Mental

Chapter Ten examined various characterisations of the physical, and settled on (P) as a generalised expression of what it means to say of a property that it is physical. In this section we examine how best to characterise the mental. Armed with two conceptions, one of the physical, and one of the mental, we will be well placed to consider whether reality is best characterised—fundamentally, ontologically—as consisting of purely physical entities; purely mental entities; two kinds of entities, alongside each other, one purely physical and the other purely mental; or of consisting of a single kind of entity, one which is neither best characterised as purely physical nor as purely mental.

A wide variety of phenomena falls under a pre-theoretical conception of what counts as mental: things such as beliefs; desires; emotions; moods; frames of mind; unconscious urges; thoughts; language; awareness; willings; worries; compulsions; phobias; phenomenal experiences; sensations; trains of thought; perceptions, and more besides. We come to group all of these phenomena together, I think, in part because we stand in a particularly intimate relationship to a particular subset of each of these categories; those which we call our own beliefs; worries; experiences etc. It is not immediately apparent that all these things share something in common in virtue of which they are all grouped together as mental phenomena. It seems at least plausible that a full account of the fundamental nature of mental phenomena will be heterogeneous. If this is the case, then we are unlikely to be able to provide a single characterisation, such as (P), which captures what it is for an entity to be mental. In what follows I will address a number of attempts to provide such a characterisation, and, considered in light of trying to answer questions such as (10.i)-(10.iv), suggest that none of these are satisfactory. I will go on to examine some more restricted notions of the mental which focus on phenomenal experience.

11.1 Intentionality

One answer one might give to the question of how best to characterise the mental is by appeal to the notion of intentionality. Brentano (1874) suggests this approach, stating that intentionality is the "mark of the mental". If characterising the mental in terms of the intentional is to be informative, then we need to give an account of what it is for something to be intentional, in terms which both avoid mention of mentality and which are in some sense clearer than our pre-theoretical grasp of mentality (we would not require this if all

we wish to do is find a way to pick out mental items, but this is not sufficient for the present task, as we are interested in the nature of the mental, hoping to equip ourselves to answer questions regarding whether or not mentality and physicality are fundamental features of the world and how they relate one to the other).

If intentionality is to serve as an appropriate characterisation of the mental, then it had best turn out that all the sorts of phenomena listed above exhibit intentionality, and likewise that phenomena we are not comfortable welcoming into the mental fold do not do so. Intentionality has been the subject of a vast amount of philosophical discussion and debate, and for reasons of space I am not able to examine this material in anything like the detail it doubtlessly deserves. (See, for instance, Crane (2001) for an extended discussion.) Brentano characterises the intentional as below:

[...]what we might call, though not wholly unambiguously, reference to a content, direction toward an object (which is not to be understood here as meaning a thing), or immanent objectivity. Every mental phenomenon includes something as object within itself, although they do not do so in the same way. In presentation, something is presented, in judgment something is affirmed or denied, in love loved, in hate hated, in desire desired and so on. (1874, p.88)

Adopting the Brentano Thesis (that intentionality is the mark of the mental), furnishes answers of the following sort to questions (10.iii) and (10.iv). A property will count as mental just in virtue of instantiating that property, the object that does so exhibits the feature of intentionality. A complex object will count as mental just in case it exhibits intentionality. It is worth noting that a complex object may be such that it exhibits intentionality, but that there are no individual properties it instantiates in virtue of which it exhibits this feature.

Being intentional may be a result of complexes of appropriately related properties. Should this be the case, then it appears that there might be mental entities—complex objects—but no mental properties, according to the Brentano Thesis. Nothing I say below turns, however, on whether this is, or is not, the case. The proponent of the Brentano Thesis will not want to allow that a property counts as mental just in case it is part of a complex of properties which, in virtue of instantiating that complex, the object that does so exhibits intentionality. It may be the case, for instance, that all mentality requires some physical basis. In this sense, certain physical properties of the complex object which does exhibit intentionality will be part of the complex in virtue of which it does so. However, *prima facie*, it does not appear that one would want to count these very properties as mental.

It is clear that many phenomena that we would pre-theoretically accept as mental states exhibit intentionality. From the list given above, I think it is unproblematic to ascribe intentionality to the following items: a belief always seem to be a belief of, that or in such-and-such; desires seem to be to, that, for or against such-and-such; unconscious urges seem to be similar to desires in this respect; thoughts are about, concerning or that something-or-other; many of the entities involved in language seem to be amongst the clearest candidates for exhibiting intentionality; when one wills, one wills that such-and-such comes about; to have a compulsion is to be strongly drawn towards doing something or other in some particular way, and it looks appropriate to characterise this specific course of action as the intentional object of the compulsion; phobias are fears of some particular sort of thing; trains of thought have, metaphorically speaking, some destination, a broad subject matter, which looks like a good candidate for an intentional object; perceptions are seeing, hearings and so on of something-or-other.

Regarding the other items on the list, things are not quite so clear cut. Whilst emotions and moods do clearly exhibit intentionality at times, they arguably do not always do so. Those reporting depression, for instance, often report sadness, anxiety or boredom that is not about *anything*, but rather involve "[...]the world as a whole looking strangely different" (Ratcliffe, 2012). It appears plausible that such states are amenable to non-intentional analyses. To be in a certain frame of mind does not seem to involve, in the way entertaining a belief or a thought does, standing in a relation to some intentional object. Rather, being in a certain frame of mind is plausibly characterised as being in a state which somehow modifies or colours the manner in which one does stand in such relations. Awareness, like emotion, may often have an intentional object, but there is a sense of the word, when it is used say in phrases such as "you should be aware of your surroundings" where this is less clear. Whilst the surface grammar of such a phrase suggests "your surroundings" as the intentional object of the recommended state of awareness, another plausible understanding of what it is to be in such a state is to be in a state of readiness to engage with particular features as intentional objects. Frames of mind and awareness may be importantly related to intentionality, without themselves exhibiting the feature. Phenomenal experiences and sensations do not look to be always straightforwardly intentional. Undergoing a certain phenomenal experience, or a particular sensation, has a specific character, there is something that it is like to undergo just that experience or sensation (think about the way an itch differs from a tickle, or an experience of extreme heat differs from one of time flying). However, it is less than clear that having such a

character is a matter of intentionality. An itch feels a certain way—a very specific sort of way—but it does not seem that an itch is *about* that feeling; that the itch *contains*, or is *directed towards* that feeling; rather, experiencing the itch just is feeling that way. Some sensations, such as itches, also tend to have a location, they are felt in some part or other of the body. But again, they do not seem to be *about* or *directed towards* that location.

How should we respond to such cases—instances of what look to be pre-theoretic paradigms of mentality, but regarding which it is less than clear that they exhibit intentionality—in light of an attempt to understand the mental in terms of the intentional? Various options present themselves. One, which is unlikely to be very appealing, would be to exclude, on the basis of their appearing not to be intentional, the sorts of phenomena described in the previous paragraph from counting as mental. Such an approach is unattractive, however, as it not only flies in the face of a common sense notion of what counts as mental and what does not, but also renders accounting for mentality in terms of intentionality mere stipulative redefinition. One might take the opposite lesson from such phenomena, and conclude that they are not intentional, that they do, as common sense suggests, count as mental, and that therefore not all mental phenomena is intentional phenomena. Such a line of thought may well be attractive to an opponent of the attempt to characterise the mental in terms of the intentional, but will, for obvious reasons, be deeply unattractive to the proponent of this view. Another sort of approach that could be taken would be to argue that such states are indeed intentional. Arguments could be given, and the notion of intentionality expanded upon and broadened such that, despite the *prima facie* appearance that sometimes emotions, moods, sensations etc. defy characterisation in intentional terms, in the final analysis, they do all turn out to exhibit intentionality. This would allow the proponent of the claim that intentionality is the mark of the mental to accommodate pre-theoretic intuitions regarding what counts as mentality.

This final approach appears to be the only attractive option for anyone who wants to maintain the claim that intentionality is the mark of the mental. However, such an approach presents (at least) two challenges. First, on pain of becoming *ad hoc*, the broadening of the concept of intentionality cannot be done in a piecemeal fashion such that it simply accords with some common sense conception regarding which phenomena are to be counted amongst the mental. Rather, a principled approach must be adopted. This raises the second challenge: just as the first approach discussed above is unattractive because it excludes too much intuitively mental phenomena; an approach which *includes* too much intuitively non-mental phenomena will also be unattractive. As Chisholm puts it:

The problem for proponents of this[...] [the Brentano] thesis is not so much that of showing that mental phenomena *are* intentional as it is that of showing that physical phenomena are *not* intentional. (1967, p.203)

Given a broad account of intentionality, books, maps and signage (amongst other things) all seem, in important ways, to be directed towards some object or to make reference to some content; that is, to exhibit the feature of intentionality. However, such things do not appear to be, at least on a common sense, pre-theoretical view, examples of mental entities. If accepting that intentionality is the mark of the mental means accepting that road signs and metro maps possess mentality, then it seems this approach to characterising the mental includes too much. However, worries such as this can be answered by appeal to 'derived intentionality' (for more on this distinction see Searle (1983)). Books, maps and signage (and other examples of similar apparently non-mental phenomena which exhibit intentionality) are only intentional in virtue of some non-derivatively intentional entities bearing appropriate relations to the relevant book, map or sign.¹⁹⁰ The distinction between derived and non-derivative intentionality provides a principled line along which to divide phenomena. Thus, entities which exhibit only derived intentionality need not be considered mental, and so as long as all the non-derivatively intentional entities are relatively well aligned with a common sense conception of what should and should not count as mental, then a broadened account of intentionality need not be seen to be unattractive on the grounds that it ascribes mentality to too many common-sensically non-mental entities; at least, not on the grounds of the sort of intentionality exhibited by things such as books, maps and signage.

However, if there are entities which are non-derivatively intentional, and which, common-sensically speaking, do not appear as though they ought to count as mental entities, then either the view that intentionality is the mark of the mental, or our common sense classification of which entities are mental and which are not, ought to be abandoned. It has been suggested by Martin and Pffiefer, Molnar, and Place that dispositions seem to meet the traditionally proposed criteria for possessing the feature of intentionality:

¹⁹⁰ The nature of exactly how derived intentionality works and the nature of the relevant relations that need to obtain between non-derivatively intentional entities and those that exhibit derived intentionality need not concern us here.

We will show that the most typical characterisations of intentionality[...] all fail to distinguish[...] mental states from[...] dispositional physical states. (Martin and Pffiefer, 1987, p.531)¹⁹¹

I think that the Brentano Thesis is basically mistaken. Thinkers who wished to deny the intentionality of certain types of mental states have said this before, of course, but my intention is to subvert the Brentano Thesis from the other direction, as it were. I accept the intentionality of the mental, and go on to argue that something *very much like* intentionality is a pervasive and ineliminable feature of the physical world. (Molnar, 2003, p.61)

If[...] you believe, as I do, that 'intentionality' is a philosopher's technical term, and that it means whatever the typical characterizations of it given by philosophers make it mean, you must conclude that intentionality so defined is the mark not of the mental, but of the dispositional. (Place, 1999, p.225)

If dispositions exhibit intentionality, then accepting the Brentano Thesis, which entails that to exhibit intentionality is sufficient to count as mental, leads one to accept that any substance which instantiates dispositional properties has some measure of mentality. Given the ubiquity of dispositional properties on the ontology proposed in this thesis, accepting the Brentano Thesis seems to lead to panpsychism.¹⁹² Furthermore, in the last chapter, dispositionalism was identified as a key component of what it means for something to be physical! The second challenge outlined above cannot be met: taking intentionality to be the mark of the mental, at least on the sort of characterisation Brentano lays out in the quotation given, has the result that many more sorts of entity count as mental than our common sense conception of the term would allow. Rocks, refrigerators and Rubik's Cubes all instantiate dispositional properties, but on no common sense conception of mentality would such things be included in the set of things which have minds. Either our common sense view of mentality must be jettisoned, or the Brentano Thesis must be rejected; and I contend that the latter of these is the more palatable. It may be necessary for something to

¹⁹¹ Martin and Pffiefer argue that the spirit of the Brentano Thesis is correct—intentionality ought to be the dividing line between mental and non-mental phenomena. Therefore, they hold, given that seemingly non-mental dispositions meet the criteria for intentionality, we must have our characterisation of intentionality wrong. See Chapter Seven of this thesis for a discussion of the alternative notion of intentionality that Martin proposes in his later work. That notion, however, differs significantly from the one under discussion here, and so Martin and Pffiefer's point stands as a criticism of the Brentano Thesis as characterised in this chapter.

¹⁹² Mumford (1999) accuses Place of being committed to panpsychism on the basis of his argument that dispositions seem to exhibit intentionality. However, as Place (1999) notes in his reply, this only follows if one assumes the truth of the Brentano Thesis: that to possess intentionality is sufficient to count as mental. This is, however, the very claim that is in dispute.

count as mental for it to exhibit intentionality, in the sense under discussion above, but it does not look to be sufficient.

11.2 Introspection

Arthur Pap offers the following characterisation of mental states:

Let us describe a mental state as a state which can be directly observed only through introspection and cannot be directly observed by more than one individual, viz. the individual who is in that mental state. (1949, p.267)

For a state to count as mental is for it to be, first, such that only one individual is in that state (of course, other individuals might be in exactly similar states), and secondly, such that it can only be directly accessed by that very individual, and only through a process of introspection. Pap's characterisation of the mental would answer questions (10.iii) and (10.iv) in something like the following ways: a property counts as mental just in case its instantiation is constitutive of the object that instantiates it being in a state which is directly observable only by that very object and only via a process of introspection; a complex object counts as mental just in case it is in a state such that that state is directly observable only by itself and only via a process of introspection.

Like the Brentano Thesis, Pap's account seems to capture something that is certainly common to many of the sorts of phenomena that, common-sensically, would be thought of as mental. Returning to our list, emotions; moods; thoughts; awarenesses; willings; worries; phenomenal experiences; sensations and perceptions seem to straightforwardly fit this characterisation. Whilst we might sometimes talk in terms such as 'seeing the worry written all over her face' or 'feeling her pain'; such talk is broadly metaphorical—for instance, a creased brow and trembling lip are signals on which we take it to be a reliable inference that the person exhibiting them is worrying about something—the 'seeing' here is indirect.

However, it does not seem to be so clear that unconscious urges, compulsions and phobias fit the characterisation given by Pap. In the first case, what makes an urge unconscious is its very inscrutability to introspection; these sorts of phenomena may not be directly observable by anyone. Thus, it seems that unconscious urges fail the test for mentality on Pap's account. However, unconscious urges seem, common-sensically at least, to be paradigm examples of mental phenomena. Perhaps there are no such urges. It is at least controversial whether or not the unconscious is a genuine aspect of human

psychology. If in fact there is no unconscious, it might be held that no problem arises from the consideration. However, I think this move is a little quick. If we are to make use of Pap's account in the present context, we are treating it as having ontological weight. This means that not only should the characterisation be apt for actual phenomena, but for merely possible phenomena also. Whilst the claim that there is no unconscious aspect to human psychology may be thought to have sufficient weight to merit assertion, the claim that there could not be any psychology that had an unconscious aspect (essentially, a claim that a Freudian picture of the mind is not only false, but *impossible*) is much stronger, and enjoys less support.¹⁹³ At the least, it seems that the question of the (metaphysical) possibility of unconscious urges and the like is an open one. This given, the possibility of there being unconscious aspects to the mind, whilst perhaps not decisive against, certainly casts doubt upon the adequacy of Pap's characterisation of the mental. Perhaps being exclusively accessible to introspection is sufficient for a state to count as mental, but it is questionable whether it is necessary.

Similar issues seem to arise with compulsions and phobias. It may be much clearer to others that someone has a particular compulsion or phobia on the basis of their behaviour than it is to the very person who possesses these states. Perhaps, with careful introspection, compulsions and phobias can be directly observed, and thus do not pose a problem for Pap's account, but at the very least it is not as clear that they do as it is in other cases (such as, for instance, perceptions or sensations).

Problems of a similar nature arise for the second part of Pap's characterisation; that for a state to count as mental, it must be directly accessible to only one individual. I contend that it seems to be an open question as to whether or not paradigmatic mental states might be accessible to more than one individual. Examples of mental states being directly accessible to more than one individual abound in literature and film. In Gene Rodenberry's television and film series *Star Trek: The Next Generation*, Counsellor Deanna Troi is an 'empath', she has the ability to directly sense the emotional states of others. Group-minds are common in science fiction, where the experiences of any one individual within the group are had by all members; for instance, the Children in John Wyndham's *The Midwich Cuckoos*, of whom one of the main characters in the book, Gordon Zellaby says:

¹⁹³ Perhaps it could be insisted that unconscious urges and the like can exist, for Pap, but they just will not *count* as mental, due to not being accessible to introspection. This move, however, seems at worst ad hoc; a principled reason needs to be given, independent of availability-to-introspection in support of holding, for instance, that a conscious desire is mental but an unconscious one is not.

And since the mind [of the Children] is collective, what about the sensations it receives? Are the rest of the children enjoying her bullseye too? It would appear not, and yet they must be aware of it, and perhaps of its flavour. A similar problem arises when I show them my films and lecture to them. In theory, if I had two of them only as my audience, all of them would share the experience—that's the way they learn their lessons[...] (1957, p.132)

In the two group-minds of the Children (one composed of four boys, the other of four girls), direct access to sensation, memory and perception is not limited to a single individual, but rather is available to all four members of the group. Mind-reading—the direct accessing of the thoughts of another, whether due to some innate or acquired mental ability or via some sort of technological device—is another common fictional trope (see, for instance, E. E. 'Doc' Smith's *Skylark* series of novels). It is unlikely that any of these phenomena actually occur. However, whether Counsellor Troi style empathy, minds like the collective minds of the Children, and mind-reading are *possible* seems a much more open question.¹⁹⁴ If they are possible, then it seems that thoughts, emotions, perceptions and the like all fail to meet Pap's characterisation of the mental it is not the case that such states "[...]cannot be directly observed by more than one individual" (1949, p.267). It seems that if one wishes to adopt Pap's characterisation, then one faces a dilemma: either endorse the claim that, metaphysically speaking, Troi's empathic ability, group-minds and mind-reading are all impossible, and thus take on the responsibility for providing good reasons in support of that claim, or else accept the possibility of such things, and with it the conclusion that almost all the phenomena we would, on a common sense view, take to be mental, do not in fact qualify as such. Neither horn looks attractive, although as with the previous worry regarding the unconscious, perhaps this problem is not quite so grave as to be decisive against Pap's account.

A final worry for attempting to characterise the mental in Pap's terms—as any state which is directly accessible only by introspection and only by the individual in that state—is generated by the inclusion of the term 'individual' in the characterisation. In order for the characterisation to avoid circularity, some sense must be given to the term 'individual' that does not include terms such as 'subject of experience' or 'psychological unity'. An 'individual' cannot be characterised in terms of a 'subject of experience' or a 'psychological unity' for Pap, as this would reintroduce mentality into what is intended as a characterisation of mentality. What must be avoided is a presupposition of mentality in the

¹⁹⁴ Indeed, some people take such phenomena to not only be possible, but to have actual instances. Such belief strikes me as unjustified given the evidence, but not logically incoherent.

characterisation of what it takes for something to count as an 'individual'. This means that many common accounts of individual personal identity which make use of notions such as being a subject of experience or of being a psychological unity of one sort or another will not be available to anyone adopting Pap's characterisation of mental states.¹⁹⁵ Other conceptions of individual personal identity are available, so again, this worry is not decisive against the characterisation, but it adds to the theoretical baggage one must accept if one chooses to adopt Pap's account.

Neither the Brentano Thesis, which on close inspection seems too radically at odds with a common sense conception of what does and does not count as mental, nor Pap's characterisation of the mental, which carries with it significant theoretical baggage (a commitment to the metaphysical impossibility of Freudean psychology and various parapsychological phenomena and restrictions on the way we can characterise individuals in this context) are attractive. Many of the problems for these two positions arise from the diversity of the phenomena which on a common sense view seem to be paradigmatic examples of mental phenomena. This might give us reason to think that no simple, unified characterisation of the mental might be available.

11.3 The Phenomenal and the Psychological

Chalmers recognises this issue, and distinguishes between two broad classes of mental phenomena, what he calls 'psychological' and 'phenomenal'. Psychological mentality is characterised as:

[...]the causal or explanatory basis for behaviour. A state is mental in this sense if it plays the right sort of causal role in the production of behaviour, or at least plays an appropriate role in the explanation of behaviour[...] What matters is the role it plays in a cognitive economy. (1996, p.11)

in, contrast, phenomenal mentality is characterised as:

[...]conscious experience[...] a mental state as a consciously experienced mental state. (*ibid.*)

that is, one of which:

¹⁹⁵ Approaches of this sort include such as Locke's memory-based account, and its descendents, for instance, Shoemaker (1970).

[...]there is something it is like to be in that mental state[...] we can say that a mental state is conscious if it has a *qualitative feel*—an associated quality of experience. (*ibid.*, p.4)

Given a common sense understanding of the term 'mental', there is no competition between these two notions; both psychological and phenomenal states or entities properly count as mental. Furthermore, these two characterisations ought not to be seen as mutually exclusive, some states might be *both* psychological and phenomenal and some might be one but not the other (*ibid.*, p.12 and pp. 16-17). It should be clear that this sort of account, in recognising the diversity of the concept of mentality, immediately avoids some of the problems discussed above: for instance, it can accommodate unconscious urges, compulsions, phobias etc. which might be unavailable to introspection as psychological states; undirected feelings of sadness or anxiety as phenomenal, and so on. I am unable to think of examples of phenomena which seem, from a common sense point of view, to qualify as mental, and yet do not meet one or the other of these characterisations: Chalmers' account seems to include everything it ought to.

There might be some worry that, like the Brentano Thesis, Chalmers' characterisation of psychological mentality might include too much. Whether or not this is the case will turn on what interpretation is given to "the right sort of causal role" and "an appropriate role in the explanation" in the quotation given above. All sorts of phenomena play causal and explanatory roles with regards to the behaviour of complex organisms, including, but probably not limited to a huge variety of internal states of the organism, environmental features and historical factors. However, we will not want to count all such phenomena as mental. The presence of oxygen in the environment is causally relevant to any behaviour that human beings engage in (without it, there would be no behaviour occurring at all), but it is an unacceptable departure from common sense views about what is and is not mental to count the presence of oxygen as a mental state. The challenge for elaborating on the notion of appropriateness at play in the characterisation is to give the term 'appropriate' a sense in this context other than simply whatever-is-in-line-with-a-common-sense-view-of-mentality. Whether or not this challenge can be met I am not sure.

However, thankfully, this need not be an issue that detains us here. The context of the present discussion is ontological. We are interested in how the mental and physical can be characterised with a view to answering questions about whether reality is fundamentally constituted of just physical entities; just mental entities; both physical and mental entities or entities which are not best characterised as either physical or mental.

Chalmers makes it clear that psychologically mental entities are not ontologically distinct from non-mental entities:

The psychological aspects of mind pose many technical problems for cognitive science, and a number of interesting puzzles for philosophical analysis, but they pose no deep metaphysical enigmas[...] The reason for this is clear[...] the question "How could a physical system have psychological property *P*?" comes to the same thing as "How could a state of a physical system play such-and-such a causal role?" This is a question for the sciences of physical systems. (*ibid.*, p.24)

Psychological mentality is ontologically of a kind with the physical world, according to Chalmers. It is a matter of dispositionality, causality and structure, which as we saw earlier in this chapter is a central aspect of what it is for something to be properly characterised as 'physical' according to (P). Whatever elaboration on the notion of appropriateness that appears in the characterisation of psychological mentality is given, it will not have ontological bite, but will, it seems be primarily concerned with our explanatory ambitions and norms. The presence of oxygen in the environment may be excluded from the notion of psychological mentality just because, in the epistemological context at hand—explaining behaviour—it can be taken as a given, a standing condition, a prerequisite, or the like (even if one rejects the notion of anything being a standing condition *metaphysically* speaking).

If there is no distinction to be made, in a fundamental, ontological sense, between physical phenomena and psychologically mental phenomena, then we need no longer concern ourselves with the nature of the latter. It is enough to note that, once a pluralistic view of mentality such as Chalmers' is adopted, we can straightforwardly accept that some phenomena which is, on a common sense view, paradigmatically mental may well just turn out to be physical (at least, in fundamental, ontological terms). Questions about the relationship between the physical world and psychological mentality come under what, according to Chalmers, we might call the 'easy' mind-body problem—easy in that there does not, *prima facie*, appear to be an ontological gulf between the physical and the psychological (*ibid.*, pp. 24-25). Should it turn out that all mental phenomena is psychological, then it seems the physicalist worldview will be vindicated.

However, if there are phenomenal mental states—and first person experience suggests strongly that there are—the question regarding the ontology of mind and body remains open. In the case of phenomenal mentality, the analogous question to that posed by Chalmers in the quotation above is 'How could a physical system have a phenomenal property *Q*?', which comes to the same thing as 'How could a state of a physical system have a qualitative feel; an associated quality of experience?'. It is this sort of mentality

which motivates the questions regarding the ontology of mind and body: is it the case that phenomenal mentality is, ontologically speaking, distinct from physicality and psychological mentality? How phenomenal mentality relates to physicality we could consider the 'hard' mind-body problem, and how it relates to psychological mentality Chalmers' calls the mind-mind problem. Unlike in the case of psychological mentality, it is not clear that answering these questions is a job for "the sciences of physical systems" (*ibid.*, p.24).¹⁹⁶

Chalmers' notion of phenomenal mentality has two aspects: phenomenal mentality has a qualitative nature, and this qualitativity can be the content of, or inform, or feature in an experience. The quotations looked at thus far have been concerned with states. Chalmers' does not offer an explicit account of the ontology of states. However, he equally often talks in terms of properties, (for instance, "[w]e have seen that there is a psychological property associated with the experience of emotion[...]" (*ibid.*, p.28) or "[...]when a phenomenal property is picked out[...]" (*ibid.*, p.23). States, I take it, are the instantiations of a property or some properties by a substance or some substances at or over a period of time. Thus, states are not ontologically fundamental, and can be explained in terms of substance and property. Properties are the ways substances are. Whether or not something meets the characterisations laid out by Chalmers', thus, will primarily be a matter decided on the basis of the nature of the properties that thing instantiates. Thus, from Chalmers' characterisations of the mental we could generate the following principle to complement (P) and to furnish an answer to question (10.iii):

(M) A property is properly characterised as mental if it: (i) plays an appropriate role in the causal or explanatory account of behaviour, that is, is a psychological property; or insofar as it (ii) has some sort of qualitative nature which (iii) can be part of the content of, or inform or feature in an experience.

A complex object will count as mental, on Chalmers' characterisation, just in case it instantiates properties which satisfy (M). Thus, as with the discussion of the characterisation of the physical above, answers to question (10.iv) are to be given in terms of answers to question (10.iii). Whether or not some object counts as mental and physical is a matter to be settled according to the properties that object is characterised by. In what follows, we will not be concerned with properties which are properly characterised as

¹⁹⁶ This is not to beg the question against physicalism. It *might* turn out that answering such questions is a job for the sciences of physical systems, but it is not, as it might be thought to be in the psychological case, *obvious* that it is so.

mental just in virtue of meeting condition (i), the purely psychological properties, as our concern is with the 'hard' problems.

Galen Strawson's position on how to characterise the mental is similar to Chalmers'. Strawson recognises the divide between psychological (dispositional, non-experiential—or DN—phenomena, in Strawson's own terms) and phenomenal (or experiential, in Strawson's own terms) phenomena. However, he suggests that psychological (dispositional, non-experiential) phenomena are not genuinely mental phenomena (1994, pp. 165-167). However, if the distinction is accepted and the specifically metaphysical differences between the phenomenal and the psychological discussed above noted, nothing really turns on this issue; it is merely terminological.

Strawson argues in favour of the claim that "it is only the actual occurrence of experiential phenomena that is a distinctively mental occurrence" (*ibid.*, p.174). This claim might be seen to be in conflict with the 'can be' that appears at the start of part (iii) of (M). If Strawson's claim is correct, perhaps 'can be' should be replaced with 'is'. However, I do not think such an amendment is necessary; indeed, I think it weakens the characterisation. Consider the following two (exhaustive) options: either whatever, ontologically speaking, accounts for experiential phenomena (let's call this 'E') is as a matter of necessity always actually experienced, or else whatever does so is sometimes actually experienced and sometimes not. If the former is the case (as I suspect Strawson might take it to be), then the 'can be' turns out to be equivalent to 'is'; for in this case if E exists, then E *is* actually experienced just in virtue of its ability to be so. If the latter is the case, and E accounts, ontologically speaking, for experiential phenomena, but is not as a matter of necessity always actually experienced, then E can exist at *t* and not be experienced at *t*; thus, whether or not E is actually experienced does not seem to be a matter which is determined entirely by E's nature.

Bearing in mind that the sort of characterisation of 'mental' for which we are looking ought to bear ontological weight, it should be one that is determined by the nature of the entities under consideration. Thus, surely, it will be E's *ability* to be experienced—that it 'can be'—which should qualify it as counting as mental. Given that the 'can be' appearing in (M) is consistent both with the view that Strawson argues in favour of, and with its opposite, it turns out (M) is neutral between those views, and thus is not in conflict with Strawson's position. However, if (M) were to be amended so that part (iii) began with 'is', then (M) *would* be in conflict with the latter view. I cannot see conclusive grounds for preferring one view to the other, and on this basis I take it to stand in favour of (M) that it

is consistent with both (and even if you *do* think there are good grounds for preferring one view to the other, this does not count against (M) as currently formulated whatsoever).

A worry arises for (M) that bears comparison to the problem raised earlier for Pap's account regarding the inclusion of the term 'individual' in his characterisation of mentality. Part (iii) of (M) makes reference to 'experience', and it could be objected that this term cannot be understood without employing the concept of mentality itself, or that at least the notion of 'experience' is equally as mysterious as that of mentality. There is something to this worry, and it is one that Chalmers' candidly accepts, holding that experience just has to be taken as a primitive, whilst noting that at least, as far as primitives go, it has the advantage of being one with which we are intimately acquainted (see, for instance, *ibid.*, pp. 3-4). I am inclined to agree with Chalmers' sentiment that experience might have to be taken as a primitive. If it is, then (M) in no sense provides an analysis of, or definition of, the mental; but it can still function to illuminate what it is for something to count as mental. A similar move might be available to Pap: to take the notion of 'individual' as primitive. However, the cases are not quite analogous. There are good reasons to suppose that 'individual' *can* be given an analysis, one in terms of mental states, and so in Pap's case it looks like the direction of explanation is the wrong way around. Conversely, in the case of (M), the notion of 'experience' looks like it is co-primitive with the notion of 'mentality': part of what it is for something to be mental is for it to feature in experience, and part of what it is for something to be an experience is for it to feature mental things. Naturally, if experience *can* be given an analysis in terms which do not invoke mentality, then this analysis can be plugged in to (M) and the worry disappears. Whilst my intuition runs with Chalmers' that this will not be possible, nothing I say turns on this issue, and so I am happy to remain open to the possibility that experience could be analysed.

As a characterisation of what it is for something to count as mental, (M) has significant advantages over both the Brentano Thesis and Pap's account. First, (M) seems to accord with a common sense view of mentality. It does not either exclude phenomena which, on a common sense view of the mind, seem paradigmatically mental, nor does it include phenomena whose acceptance as properly mental phenomena would require a radical departure from a common sense view of the mind. Secondly, it does not carry with it the sort of metaphysical baggage that I have argued above makes Pap's account an unattractive one. Finally, whilst both it and Pap's account face a similar problem—outlined in the previous paragraph—it seems that a more (if not completely) satisfying response to this worry can be given on behalf of (M) than can be given on behalf of Pap's account. For

these reasons, in the discussion that follows, I will take (M) to provide the best characterisation of what it is for something to count as mental.

Over the last two chapters we have investigated how the physical and the mental might best be characterised, and, having considered various options on both counts, arrived at (P) and (M). Neither characterisation is perfectly precise, nor are either completely clear of worries or objections. They will not do as analyses or definitions. However, I hope that they are clear enough, and substantial enough, that they can help us to get a grip on exactly what questions regarding mind and body are getting at, and to clarify what proper answers to such questions might look like. What I have said over the past two chapters has been briefer than it might be were there no limitations on time or space, but I hope I have done enough to motivate two claims. First, that it is essential that in attempting to answer questions concerned with the ontology of mind and body, we engage with a developed account of the ontology of properties; for on the best available characterisations of what it is to count as physical and mental, properties play the central role. Secondly, that central to the notion of physicality is dispositionality, and to the notion of mentality is qualitativity.

The next chapter will address the questions concerning the ontology of mind and body in the context of the ontology of properties—the particular interpretation of Martin's Limit View—argued for in Chapters Four, Five and Six of this thesis, making use of (P) and (M) to precisify these questions and shape the answer given to them.

Chapter Twelve: The Limit View and the Nature of Mind: Sketch for a Neutral Monism

"If, as Aristotle said, 'thought and its object are one,' so are sensations and perceptions one with their 'objects.' In fact, there are not sensations or perceptions and their objects. There are objects, and when these are included in the manifold called consciousness they are called sensations and perceptions." (Holt, 1914, p.214)

In this chapter I will argue that, if we accept the version of Martin's Limit View for which I have argued, then the approach to the ontology of mind and body that we ought to adopt is—a once popular, now neglected—neutral monism.¹⁹⁷ I briefly outline the core commitments of neutral monism and provide a survey of several versions of it, focussing on those proposed by Ernst Mach, William James, Bertrand Russell and, most recently, Kenneth Sayre. I then go on to outline the version of neutral monism which I believe to be the natural position to adopt concerning the ontology of mind and body if one accepts the interpretation of the Limit View argued for in this thesis. Following this, I examine the space occupied by my version of neutral monism in the conceptual landscape of the mind-body debate, exploring how it relates to other monisms, both mental- and physicalistic; to emergent dualism and to panpsychism. I then respond to some objections often raised to neutral monism. I conclude with a brief look at the advantages of adopting a neutral monism of the sort I sketch out, and at potential areas of application.

This chapter does far less than present a fully-fledged theory of mind and body or account of the place of consciousness in the natural world. Rather, it outlines the shape which I believe such a theory should take if one adopts the version of the Limit View argued for in this thesis. Prima facie, the position I sketch has the potential to make headway on difficult question in the philosophy of mind and in metaphysics more generally. On these grounds, I contend, it merits serious consideration.

¹⁹⁷ It should be noted that recent comments from Heil, one of the principle proponents of the powerful-qualities view, are suggestive that he may be leaning towards some version of neutral monism (see for instance (2013)). The position this chapter advances was, however, developed independently of Heil's recent work.

12.1 The Core Commitments of Neutral Monism

Neutral monism has two central features. The first of these is its (unsurprising) commitment to a monistic ontology: for the neutral monist, there are no ontological divisions between different kinds of fundamental entity. The 'monism' of neutral monism is not a claim that there is, numerically, just one fundamental entity (as in, for instance, a Spinozistic metaphysic, or in Schaffer's 'priority monism' (2010)); although I take neutral monism to be compatible with this claim. Furthermore, the 'monism' of neutral monism does not commit one to a one-category ontology; although many traditional neutral monists did adopt bundle theory, this is not an essential feature of the view (see Stubenberg (2010, section 7.4)). Rather the claim is that, in some important sense, all the fundamental entities (whether these belong to a single category, such as in a trope theoretic ontology or to various categories, say, substance and mode) are of a single type.¹⁹⁸

The second (again, unsurprising) claim of neutral monism is neutrality. Neutral monists hold that the fundamental entities are all of a type, as discussed above, and that the nature of that type is such that the fundamental entities are best characterised as neutral between physical/material and mental/psychological/experiential. For the neutral monist, physical and mental phenomena may still be considered real, but they are to be accounted for, ontologically speaking, in terms of phenomena which are not themselves fundamentally physical or mental.

Any view that incorporates these two commitments is a neutrally monist position. Given this, neutral monism is a relatively flexible theoretical framework; there is room for elaboration in a variety of directions. Different neutral monisms may offer wildly divergent accounts of, for instance, the nature of the neutral entities themselves and of how they relate to the notions of mind and body. In the next section I briefly outline several neutrally monist positions, before going on to elaborate my own, distinctive version.

12.2 A Brief Historical Survey

Perhaps the most significant English-speaking neutral monists, historically speaking, are James and Russell. Both, however, were influenced by Mach. For Mach, the most basic

¹⁹⁸ Just as physicalism, for example, is not committed to a one-category ontology, but just to the claim that all the fundamental entities of whatever ontological category are *physical* entities.

entities, ontologically speaking, are what he calls the 'elements'. Whilst the elements are most easily identified by considering what might now be called qualia—a particular patch of colour, a smell, a feeling of warmth—for Mach, they are not to be understood as either intrinsically mental or intrinsically physical:

A colour is a physical object as soon as we consider its dependence, for instance, upon its luminous source, upon other colours, upon temperatures, upon spaces and so forth. When we consider, however, its dependence upon the retina[...] it is a psychological object, a sensation. (Mach 1914, p.17)

Rather, it is in virtue of participating in certain groupings with other entities that what are intrinsically neutral qualify as physical or psychological. When our focus is on a particular element qua a member of one particular group of phenomena it presents itself to us as physical, when our focus is on it qua a member of another group, it might present itself as mental. This leads Mach to the following characterisations of the distinction between the physical conception of the world and the mental conception of the world:

Not the subject matter, but the direction of investigation, is different in the two domains. (*ibid.*, pp. 17-18)

I see, therefore, no opposition of physical and psychical, but simple identity as regards these elements. (*ibid.*, p.43)

The 'simple identity' to which Mach refers is not a reduction in favour of either the physical or the mental, but rather is in their both being accounted for by a single, neutral type of entity: the elements. Our immediate contact with these neutral entities is what is "[...] immediately and indubitably given[...]" in experience (*ibid.*, p.45), but they ought not to be considered to be in any sense mind-dependent.

James (see, for instance, the essays collected in (1912)) puts forward a similar position to Mach, although in his terminology the most basic neutral entities of which the world is composed are called 'pure experience'. As with Mach's 'elements', instances of pure experience are neither intrinsically mental, nor intrinsically physical. Counting as either physical or mental is a matter of how an entity is considered given its relations with certain other entities. James considers a pen:

To get classified either as a physical pen or as someone's percept of a pen, it must assume a *function*, and that can only happen in a more complicated world. (1912, pp. 123-124)

Considered in terms of being a persisting entity which can effect certain changes, be put to certain uses and stand in certain stable relations to other entities, the pen is physical; considered in terms of something that comes and goes from the immediately experienced

world depending on one's own circumstances, it is a mental item. But it is neither of these in a fundamental, ontological sense.

In his later writings on the topic, Russell presents a version of neutral monism which differs significantly from that of Mach and James.¹⁹⁹ His basic, neutral entities are 'events', which again are picked out through reference to experience:

When I speak of an event I do not mean anything out of the way. Seeing a flash of lightning is an event; so is hearing a tyre burst, or smelling a rotten egg, or feeling the coldness of a frog. (1927, p.222)

Russell conceives of physical entities as being composed of all the events that occur at the location of that entity (*ibid.*, p.385). On the basis of this commitment, plus the claims that (a) the brain is composed of microphysical particles and (b) apparently mental phenomena are events that happen where there is a brain, Russell is led to the conclusion that some of the events out of which the microphysical particles which make up a brain are composed include what are normally thought of as mental states (*ibid.*, pp. 320-321). As we have seen, for Mach and James, the neutral entities which compose a macrophysical object and the appearances of that object are to be identified; and these entities are best characterised as neutral because their respective physical and mental characterisations stem from their being considered qua being dependent on or related to various other entities. For Russell, the neutrality stems from a different source. Appearances of a pen are not the very pen itself considered qua its dependence on a retina or according to its unstable presence in the given of experience, but are rather constituents of matter quite apart from the pen—matter in the brain of the person to whom they appear. The basis for the neutrality of the events which underlie both matter and the mind, for Russell, rests on a number of claims. First, such events are not properly characterised as mental because they fail to exhibit what Russell sees as a hallmark of mentality—intentionality (see 1921, p.141). Secondly, we have no grounds, on the basis of the phenomenal quality such events have, for considering them distinctively mental, for, given all we know, *all* events may have such quality. So events are not mental. And as they clearly do not match up to a traditional conception of material or physical, Russell's events must be considered neutral.

Notwithstanding the differences mentioned above in the details of, on the one hand, Mach and James' neutral monism, and on the other, the later stages of Russell's version of this position, Stubenberg (2010, section 4) identifies some core philosophical

¹⁹⁹ His earlier formulations of neutral monism are more similar to Mach's and James'. (See, for instance, (1921)).

principles which motivate all three positions.²⁰⁰ The first of these is a thoroughgoing empiricism which puts what is given in experience centre-stage; be this Mach's 'elements'; James' 'pure experience', or Russell's 'events'. The second is a realism about what is given; all three thinkers wish to avoid idealism. It is easy to see how these positions might combine to motivate a neutrally monist position. First, what is given in experience seems quite radically different from the world as described in fundamental physics. If all knowledge is to be gained through the given, then we can know little of the theoretical entities of physics. This may make both physicalism and dualism (where one of the two kinds of fundamental entity is physical) unattractive to philosophers sharing the twin sentiments of empiricism and realism. Secondly, the commitment to realism means that the rejection of physicalism and dualism does not lead to the idealistic or phenomenistic conclusion that the world is composed of fundamentally mental entities. So, having rejected physical monism, mental monism and psycho-physical dualism, the natural place to settle seems to be neutral monism. Thus for Mach, James and Russell, their epistemological commitment to empiricism plays a major role in motivating their neutrally monist metaphysics.

A distinctive version of neutral monism has been proposed by Sayre much more recently. For Sayre (1976), the fundamental entities are states of information. These informational states are ontologically prior to both mental and physical states, and provide a reduction base for both (*ibid.*, p.16). Given Sayre's claim that both the mental and the physical can be reduced to the informational, it makes sense to consider the informational as best characterised neither as physical nor as mental. Sayre's position is a marked departure from the neutral monisms of Mach, James and Russell. It does not hold that the given in experience provides us with the most basic entities. Rather, the basic entities are "[...]mathematical (statistical) structures" (1996, p.312). Sayre (in a memo distributed to the Notre Dame philosophy department, and quoted in Stubenberg (2010)) explicitly distances himself from Russell, stating that his own position has "[...]more in common with the ontology of the late Platonic dialogues[...]" than it does with Russell's.

The discussion in this section has been, of necessity, very brief. (For a fuller account of the history and development of neutral monism see Stubenberg's excellent Stanford Encyclopedia entry (2010) and Eric Bank's (2010).) However, I hope I have presented enough to give the reader a theoretical backdrop against which to consider the position I

²⁰⁰ These same principles also motivate several other neutral monist accounts that Stubenberg discusses which I do not have the space to explore here—see (2010) for details.

sketch below. In what follows, I shall endeavour to draw appropriate parallels and contrasts between my own position and those discussed above.

12.3 The Limit View and the Ontology of Mind and Body

In this thesis I have argued for an understanding of the Limit View along the following lines. Qualitativity and dispositionality are real, irreducible, ineliminable features of the world. However, they both find their basis, ontologically speaking, in a single type of entity; what I have been calling simply properties. These properties are the ways things in the world are. Any such way some-thing is will have consequences for that thing; it will inform both what that thing is like, regardless of how it might behave in possible (but currently non-actual) circumstances (that is, it will confer some *quality* on the thing) and it will determine how it will behave in any one of a vast number of possible (but currently non-actual) circumstances (that is, it will confer some *disposition* on the thing). The property that will be the source of these contributions to the thing in question is unitary, and so these contributions cannot be separated from each other in reality, that is, we could not get rid of one whilst maintaining the other, for to get rid of one would require us to get rid of the property itself, and so the other would follow. Both the quality and the disposition are identical to the property itself, and so also to each other. However, notwithstanding this identity, there is a distinction between qualitativity and dispositionality that is more than simply an artefact of the mind. I have suggested that this claim—which some (Lowe and Armstrong) have found difficult to conceive of—can be understood by drawing on the resources of multi-categorical ontology and of Scholastic discussions of the metaphysics of distinctness. Whilst the distinction between quality and disposition is not a fully fledged, real distinction between thing and thing, it is nevertheless finds some license in the nature of properties themselves; what Suarez calls a distinction of the reasoned reason (see Chapters Five and Six of this thesis for a fuller discussion).

I have also argued in favour of the following characterisations of the notions of physicality and mentality:

(P) A property is properly characterised as physical insofar as: (i) it is a property which is referred to in a (relatively complete) theory of the relatively fundamental elements of our universe; (ii) the theory in question bears the hallmarks of a scientific theory; (iii) it is a concrete entity and (iv) confers on its bearer a

dispositional nature such that it's behaviour is highly regular allowing that this behaviour can be well integrated into the theory.

And:

(M) A property is properly characterised as mental if it: (i) plays an appropriate role in the causal or explanatory account of behaviour, that is, is a psychological property; or insofar as it (ii) has some sort of qualitative nature which (iii) can be part of the content of, or inform or feature in an experience.

Given these characterisations, the major positions in the debate surrounding the ontology of mind and body could be given the following schematisation:

(Physicalism) All fundamental properties are (P) properties. Apparent (M) properties are identical with/eliminable in favour of/reducible to/dependent on²⁰¹ (P) properties;

(Mentalism) All real properties are (M) properties. Apparent (P) properties are really constituted by (M) properties;

(Property Dualism) Some properties are (P) properties, others are (M) properties;

(Neutral Monism) Neither (P) nor (M) properly or fully characterises the real, fundamental properties. The nature of the real properties is neutral between (P) and (M).

Specific versions of each of the types of position listed above will fill out and elaborate on these schema in different ways.

We have seen that dispositionality and qualitativity play a central role in the best characterisations that can be given of the notions of the physical and the mental, respectively. Part of what it is for a property to be physical, according to (P), is for that property to confer dispositionality on its bearer. Part of what it is for a property to be mental, according to (M), is for that property to have a qualitative nature which can be the content of, or inform or feature in an experience. Whilst these characterisations involve more than simply the alignment of the physical with the dispositional and the mental with the qualitative, it is the contrast between dispositionality and qualitativity, I contend, that gives the apparent distinction between mind and body ontological bite. And according to the account of the ontology of properties for which I have argued in this thesis, no real

²⁰¹ Depending on the specific sort of physicalism on the table, delete as appropriate.

property can be fully and properly characterised as either a disposition or as a quality. Rather, properties bestow both a dispositional and a qualitative nature on the objects by which they are instantiated, but this dispositionality and qualitativity are, fundamentally, ontologically speaking identical to one another. They are accounted for by a unitary and undifferentiated entity: the property itself. One way one could put this is that properties, according to the Limit View, are neutral between dispositionality and qualitativity, between being best characterised as dispositions or as qualities.

If the distinction between physicality and mentality, when it comes to the ontological features of these notions, tracks that of the distinction between disposition and quality, then our ontology of properties will inform our ontology of mind and body. If the distinction between disposition and quality is one which can be properly drawn in fundamental ontology, then so too can the distinction between mind and body, suggesting that property dualism is correct. If the distinction between disposition and quality, however, is not one which is realised in fundamental ontology, then the distinction between mind and body will also fail to be so realised, and it would appear that a monism of one form or the other ought to be favoured over dualism. If dispositionality reduces to qualitativity, then there look to be prospects for the claim that the physical is really constituted by the mental, and the aspirations of some form of mentalism—perhaps an idealism or phenomenalism—will be met. If qualitativity can be explained in terms of dynamic behaviour of complex systems (note that it is the poor prospects on this front that Chalmers identifies as the hard problem of consciousness (1996, pp. 24-25)), then a reduction of the most mysterious features of the mind to physicality may be on the cards, meeting the theoretical goals for a variety of forms of physicalism.

None of these conditions are met on the account of properties proposed in this thesis. Properties themselves, on this view, cannot be taken to be fundamentally dispositional, at the expense of qualities; they cannot be taken to be fundamentally qualitative, at the expense of dispositionality; or indeed split into two fundamental types, qualities on the one hand, and dispositions on the other. Rather, dispositionality and qualitativity are both equally accounted for by an entity which is not best characterised as either one or other; which is neutral between the two. If the ontology of mind and body is to track that of dispositionality and qualitativity, then both are accounted for, ontologically speaking, by neutral entities which are neither best characterised as physical nor best characterised as mental: by properties themselves, powerful qualities.

The fundamental stuff of the world—the simple objects, propertied-substances—is neither best characterised as physical stuff nor as mental stuff, on this view, for properties are neither best characterised as (P) properties or as (M) properties. Ontologically speaking, all reality is composed of entities which are of a kind. Whatever the significant difference is between mind and body, it is not one which can be drawn in terms of the nature of the fundamental stuff of the world. Such a position is at odds with the debate concerning the ontology of mind and body as it is most commonly drawn today, for it is implicit in all the major positions—monisms of either physical- or mental-istic flavour and dualisms—that this distinction ought to be drawn in terms of fundamental ontology. The disagreement is simply over the relative ontological priority of mind and body; and over whether or not both actually exist.²⁰² Once one accepts, however, the sort of account of properties which I have proposed in this thesis, it becomes hard to see just how the sort of distinction driving the currently orthodox framing of the debate could be drawn. Whether or not one accepts that (P) and (M) are adequate characterisations of physicality and mentality,²⁰³ I do not believe that one can elaborate on the notions of physicality without drawing on that of causation, behaviour, structure, which are accounted for by dispositionality; or indeed on mentality without phenomenal experience, which is a matter of qualitativity, of having some intrinsic what-it-is-like-ness.²⁰⁴ If this claim seems too strong, then it can at least be noted that in the contemporary debate concerning the ontology of mind and body, it is common to make these associations (as discussed in Chapters Eight and Nine). Therefore, given the already common association of mentality with qualitativity and physicality with dispositionality, further consideration of the ramifications that specific theories of properties have for the ontology of mind and body are called for: (P) and (M) are not functioning as *deus ex machina*-s.

The version of neutral monism I am proposing here, it should be noted, does not imply any sort of anti-realism or eliminativism regarding either mind or body. For, just as it

²⁰² Note how strikingly similar the conceptual set-up of the mind-body debate is to the dispositional-categorical debate: there too all orthodox parties agree that there are two sorts of property, and simply disagree as to which exist, or, if accepting both in some sense or another, over which is more fundamental than the other.

²⁰³ As mentioned previously, I certainly do not hold them to be full definitions or analyses, but hope they are at least helpful in clarifying what is at stake in the mind-body debate.

²⁰⁴ It is important to note that some-thing X's possessing an intrinsic what-it-is-like-ness may not entail that there is a what-it-is-like-to-be-X. There being something a rock is like may not be the same as there being something it is like to be a rock (of which more below—see section 12.7).

is maintained that notwithstanding their identity, a distinction which is more-than-in-the-eye-of-the-beholder obtains between dispositionality and qualitativity, so it can also be maintained that it is so with the notions of mentality and physicality. It is natural that we are led to think of the world in terms of mind on the one hand, and body on the other, because, although each of these phenomena are accounted for by what are underlying entities neutral between the two, nevertheless, just as the distinction between quality and disposition finds some license in the way things are, so too does the distinction between mind and body. This distinction is not so great as a distinction between thing and thing. 'Mental' and 'physical' do not act as kind terms which demarcate phenomena at the fundamental, ontological level. But nor is it merely an act of the intellect to draw this distinction. (Chapters Five and Six of this thesis discuss how this distinction ought to be understood.)

One advantage that the sort of neutral monism that I am proposing might be thought to have is that it accommodates driving intuitions from the two most prominent camps in the current debate regarding the ontology of mind and body. First, in line with the aspirations of many forms of physicalism, it presents a unified picture of reality, in which, fundamentally speaking, there is no great schism of divide between what goes on in our heads and extra-cranial reality. Mentality and the physical realm are continuous with one another, and uniform. In this sense, the neutral monism I propose might be held to find a home for the mind in the natural world. Conversely, a neutral monism driven by the version of the Limit View that I have proposed also has the potential—perhaps to a limited extent—to accommodate the dualist claim that there is an important sense in which a conception of physical reality and one of mental reality cannot be fully reconciled. Whilst the lesson taken from this by the dualist is that there must exist some fundamental, ontological schism between the mental and the physical, the lesson the neutral monist who accepts the account of properties I have proposed will take is that, despite being accounted for ontologically speaking by unitary entities which are neutral between the two notions, the distinction between mentality and physicality nevertheless tracks a distinction which is given some license in the way things are: broadly speaking, it tracks that which obtains between the notions of dispositionality and qualitativity.

The version of neutral monism I am proposing should be distinguished from those proposed by Mach, James, Russell and Sayre on a number of grounds. First, in contrast to the positions of Mach, James and Russell, my position is driven by metaphysical, as opposed to epistemological concerns. Rather than taking a certain stand towards what is

given in experience, my position stems from an examination of the nature of various phenomena. Given the conclusions reached earlier in this thesis regarding the nature of properties; of the relations between dispositional and qualitative, and of the best characterisations of physicality and mentality, my version of neutral monism is the natural position to adopt regarding the ontology of mind and body. Furthermore, Russellian monism is generally understood to involve a distinction between the behaviour of an object and the underlying, non-dispositional properties which explain this behaviour (see for instance Chalmers 2003, Section 11). Regarding Sayre's neutral monism, it takes both mental and physical phenomena to be ultimately explained in terms of mathematical structures, or informational states. Such a position seems to be close to a Pythagoreanism, suggestive of a world of pure quantities devoid of quality. Thus, there is a clear difference between the metaphysics I propose, and that put forward by Sayre (which may naturally fit better with some form of strong dispositionalism—see Martin (1997) for a discussion of mathematicised views of nature and strongly dispositionalist metaphysics). Whilst both of these sorts of positions might be seen to maintain the physicalist intuition regarding the uniformity of nature, none of them look, *prima facie*, to be able to also accommodate dualist insights into the significant differences between mind and body. Insofar as an ability to do so is an advantage, my version of neutral monism may fare better than both traditional formulations and Sayre's informational version.

I have outlined my position, and distinguished it from those discussed in the previous section. In what follows, I hope to draw out more of the details of this position through distinguishing it from, and considering it in light of, the other major positions in the debate concerning the ontology of mind and body. Following this, I will examine some criticisms often levelled at neutral monism, and attempt to show how my version can be defended from these.

12.4 Neutral Monism, the Limit View and Mentalism

One objection often levelled at traditional versions of neutral monism is that rather than being neutral, the fundamental entities that the neutral monist posits are really better characterised as mental. The worry is that neutral monism actually collapses into idealism, phenomenalism or some similar position.²⁰⁵ One motivation for this line of criticism may

²⁰⁵ See for instance Popper (1977, p.199), who claims that neutral monism is essentially Berkelyan subjective idealism, or Strawson (1994, p.97 fn.6), who labels Russellian monism "phenomenalistic".

well be the sort of terminology employed by traditional neutral monists. James talks of the neutral entities in terms of 'pure experience', and Russell often of "sensation" and "appearance" (and indeed, in the quotation in section 12.2 above, whilst the term 'event' is neutral enough, the examples given are of what are typically considered to be mental states).²⁰⁶ With regards to my version of neutral monism, it should be noted that this motivation is lacking; the neutral entities proposed on my view, properties or powerful qualities, are not presented in typically mentalistic terms. However, it should still be questioned whether this criticism applies. I do not think that it does. One way it could turn out that my version of neutral monism is in fact mentalistic, as opposed to neutral, would be if, on my account, all real properties are in fact best characterised as (M) properties. But this would imply that all real properties are in fact qualities, and their dispositional nature was somehow secondary to this. It should be clear by this point that this is not the account of properties that I am suggesting. Another way that this criticism might gain purchase is if it turned out that on my view all real properties were in some way mind-dependent.²⁰⁷ Again, this is not the view being proposed here. Properties, the ways substances are, are mind-independent entities, and nothing in the version of the Limit View which I have presented in this thesis suggests otherwise.

A view which deserves special attention is one considered by Chalmers, in his discussion of Russellian monism: protophenomenalism (see his 2003, section 11). This view holds that the fundamental properties are qualities, or perhaps proto-qualities, which in the right combinations generate qualities. These underlie and account for the dispositional (and thus, physical) nature of reality. It seems contentious, at least, whether this sort of position is a neutral or a mentalistic kind of monism. Either way, my version of neutral monism should be distinguished from this one for the same reasons that it should be distinguished from Russellian monism—these reasons are outlined above.

²⁰⁶ It is not my concern here to defend the traditional versions of neutral monism from this criticism. (See Stubenberg (2010, section 7.1) and also his (2008) for a discussion.)

²⁰⁷ There is a trivial way that all real properties could be mind-dependent if panpsychism is true. (See section 12.7 below for a discussion of my version of neutral monism and panpsychism.)

12.5 Neutral Monism, the Limit View and Physicalism

Perhaps a similar worry could be raised against neutral monism from the other direction; that rather than being neutral, the fundamental entities that the neutral monist posits are really better characterised as physical, and neutral monism collapses into some form of physicalism. One way it could turn out that my version of neutral monism is in fact physicalist, as opposed to neutral, would be if, on my account, all real properties are in fact best characterised as (P) properties. But this would imply that all real properties are in fact dispositions, and their qualitative nature was somehow secondary to this.²⁰⁸ It should be clear by this point that this is not the account of properties that I am suggesting.

Another reason one might have for suspecting that the version of neutral monism that I am proposing is really a sort of physicalism might be if one adopted Stoljar's object based account of the nature of physicality, where whatever type of properties it turns out that paradigmatically physical objects instantiate (which on my account would indeed be powerful qualities) count as the 'physical' properties. For reasons already outlined, however, I do not think this account of physicality is promising (see section 10.3 of this thesis for a detailed discussion of this issue). Similar thoughts drive Strawson's (2008a pp. 20-22) conception of what it is to be a physicalist; and I would anticipate that he might consider my position to be a physicalism rather than a neutral monism. Central to his position is the idea that "[...]we have *no* good reason to think that we know anything about the physical that gives us any reason to find any problem in the idea that mental phenomena are physical phenomena" (*ibid.*, p.20). I have suggested, in arguing that (P) provides a helpful characterisation of physicality, that we do have good reason to think this. It should at least be noted that if we are to accept Strawson's position of ignorance regarding the nature of physicality, then nor does anything we know about the physical give us any reason to find any problem in the idea that both mental and physical phenomena are accounted for, ontologically speaking, by neutral entities.

12.6 Neutral Monism, the Limit View and Dual-Aspect Theory

Another account of the ontology of mind and body in light of which neutral monism should be discussed is the dual-aspect theory most commonly associated with Spinoza. According to Spinoza's metaphysic, 'thought' and 'extension' are two attributes of a single, all

²⁰⁸ I do not know of anyone who interprets the Limit View in this manner.

encompassing substance, 'God or nature'. Any given entity can be conceived as a modification of extension—as physical—or as a modification of thought—as an idea, as mental. Although these attributes characterise a single substance, they are held by Spinoza to be "really distinct" (*Ethics* I, prop. 10, schol.). Some comments in Spinoza are suggestive of distinct but united mental and physical realms:

So long as things are considered as modes of thinking, we must explain the whole order of nature, or the connection of causes, through the attribute of thought alone. And so long as they are considered as modes of extension, the order of the whole of nature must be conceived through the attribute of extension alone. (*Ethics* II, prop. 7, schol.)

This quotation suggests that these two realms are nomologically closed off from one another, running, as it were, in parallel. Thus, for Spinoza, the idea that mind and body interact is mistaken (see, for instance, the preface to *Ethics* V).

Whilst there are some striking similarities between the version of neutral monism that I am proposing, and dual-aspect theory, the two positions are distinct. In order for the two positions to be considered the same, the theoretic roles and relations of dispositionality and qualitativity on my view would need to be equivalent to those of extension and thought on Spinoza's. This, however, is not the case. Before I proceed, I should note that interpretation of Spinoza's metaphysics is both difficult and controversial. There is not the space in this thesis for serious interpretative scholarship of Spinoza's metaphysics, and I will limit myself to making two quite general claims to attempt to distinguish my position from a dual-aspect theory. The first is, I think, quite clear. The second, a little more speculative.

First, if dispositionality and qualitativity are, on my view, to be considered the theoretic counterparts of Spinoza's thought and extension, then these terms pick out attributes. Attributes need to be attributed of something; traditionally, and certainly on Spinoza's metaphysic, of a substance. On the position for which I have argued, dispositionality and qualitativity are abstracted or partial manners of considering property.²⁰⁹ If dispositionality and qualitativity are to be treated as attributes, this implies that properties, then, are to be considered as substances. This, however, is a simple category mistake. It is in virtue of instantiating properties, which I have suggested are to be themselves considered neutral between disposition and quality, that objects—propertyed-

²⁰⁹ Manners which, nevertheless, find some extra-intellectual ground or license in the nature of things—see Chapters Five and Six.

substances—have the dispositional and qualitative features that they do. One could perhaps hold a dual-aspect theory of dispositionality and qualitativity, where these terms picked out attributes stemming from the essence of a substance; but that is not the metaphysic proposed here.

The distinction that I have argued obtains between dispositionality and qualitativity is a distinction of reason, one which, whilst grounded in or licensed by the nature of the phenomena in question, is unrealised in reality, it requires *some* act of the intellect; what I have suggested is partial consideration or abstraction. This does not seem to be the case with Spinoza's attributes. Whilst the distinction between attributes in Spinoza's metaphysics does not indicate a distinction in substances, I think his 'real distinction' claim can be taken seriously: attributes appear like they may be non-substantial but nevertheless thing-like entities between which a real distinction obtains.²¹⁰ Given the differing sorts of distinctions that obtain between on my account dispositionality and qualitativity, and, in Spinoza's metaphysics thought and extension, it should not be maintained that there is a parity of theoretic role between Spinoza's attributes and my conception of property. Furthermore, the prospects for the sort of parallelism suggested in the quotation from *Ethics* II above look less promising on my view than on Spinoza's, lending further support to the claim that these two views ought not to be conflated.

There may be some interpretations of Spinozan dual-aspect theory which bring it closer to the sort of neutral monism I advance than others, but as I have suggested above, there are some quite general metaphysical principles according to which the two positions should be distinguished.

12.7 Neutral Monism, the Limit View and Panpsychism

Strawson (2008a) puts forward an argument for a physicalist-panpsychist position which centres around the following three commitments:

- (a) fully acknowledg[ing] the evident fact that there is experiential being in reality,
- (b) tak[ing] it that there is also non-experiential being in reality, and (c) [being] attached to the 'monist' idea that there is, in some fundamental sense, only one kind of stuff in the universe. (*ibid.*, p.56)

²¹⁰ Parchment (1996) argues for this interpretation of how particular attributes are distinguished from one another in Spinoza, whilst claiming that the distinction between the totality of attributes and the one substance, 'God or nature', is a lesser distinction.

He claims that any realistic physicalist must accept this sort of position. To do otherwise would be either to accept some form of dualism (by denying (c)); to accept some form of idealism (by denying (b)), or to commit what he colourfully calls "[...]the deepest woo-woo of the human mind[...]" (*ibid.*, p.55) by rejecting the existence of that which we are most certain exists: experience itself (by denying (a)). The argument is strengthened by a further claim that if (a) is denied, the physicalist's only way to accommodate the first-personal evidence we have of the existence of experience is to posit some form of emergence: fundamental reality is non-experiential, but the experiential arises from the non-experiential. Strawson holds such a position to be inherently unstable, on the grounds that:

If it really is true that Y is emergent from X then it must be the case that Y is in some sense wholly dependent on X and X alone, so that all features of Y trace intelligibly back to X (where 'intelligible' is a metaphysical rather than an epistemic notion). *Emergence can't be brute*. It is built into the heart of the notion of emergence that emergence cannot be brute in the sense of there being absolutely no reason in the nature of things why the emerging thing is as it is (so that it is unintelligible even to God). For any feature Y of anything that is correctly considered to be emergent from X, there must be something about X and X alone in virtue of which Y emerges, and which is sufficient for Y. (*ibid.*, p.65)

Accepting brute emergence, which, according to Strawson, is the only refuge of the non-panpsychist-non-eliminativist-physicalist, amounts to the acceptance of miracles, and widespread ones at that. This should be intolerable to anyone with naturalist sentiments, and thus, it turns out, is no refuge for any sort of physicalist at all (*ibid.*, pp. 55-56). Thus, anyone wishing to be a physicalist must accept that experiential phenomena are ubiquitous: they must accept panpsychism. He later suggests that the neutral monist is in exactly the same position; it cannot be held that the neutral entities are non-experiential on pain of making the existence of experience (who's denial is 'woo-woo') a matter of brute emergence, which itself should not be tolerated.

Strawson's argument is powerful. However, its conclusion that non-mentalistic monisms entail panpsychism—which I take to be the view that mentality is a ubiquitous and fundamental feature of reality—requires scrutiny if its import with regard to my position is to be properly understood. One way of interpreting the conclusion—one which seems strongly suggested by Strawson's acceptance of the view that taking something to be experiential implies the existence of a corresponding subject of experience, and therefore, given the ubiquity of experiential properties, that fundamental particles are subjects of experience (*ibid.*, pp. 71-72)—is that panpsychism should be understood as the

claim that phenomenology, the having of some 'inner life' relevantly similar to the sort enjoyed by human beings, is ubiquitous and fundamental.

Strawson is led to a conclusion of this sort because of an additional premise: his apparent commitment to the claim, discussed briefly in section 11.3 of the previous chapter, that whatever can be experienced is an actual instance of experience.²¹¹ I am not convinced by this claim, unless by 'actual instance of experience' something very different from 'inner life relevantly similar to the sort enjoyed by human beings' is meant. On the view that I am proposing, qualitativity is ubiquitous, in the sense that whenever something instantiates some property, the qualitative nature of that thing is informed in some manner just in virtue of it instantiating that property.²¹² And I have suggested that it is qualities that inform, or feature in, or characterise experiences. However, I do not think that this implies that the instantiation of a property that bestows a qualitative nature on its bearer (as any real property will) is itself an instance of experience. Another way of putting this might be that I do not find the claim that 'there is something X is like' to be equivalent to that of 'there is something it is like to be X'. It seems that Strawson must accept this equivalence.

One reason to think that whilst qualities are what inform, characterise or feature in experiences, but are not, of necessity, instances of experience, is if one accepts a distinction between the notions of what one might call an experienced-quality and a quality-of-an-experience (see, for instance, Heil (2003, section 19.3)). Experiencing the particular feel of air rushing past ones face as one rides a roller-coaster might be a good example of an experienced-quality, the exhilaration that comes alongside this a quality-of-the-experience. There is something it is like for air to rush past the face of someone riding a roller-coaster. There is something it is like to be a person past whose face air is rushing whilst riding a roller-coaster. Naturally, these two somethings-it-is-like are deeply interrelated. There would be something it is like for air to rush past the face of zombie-

²¹¹ Lockwood, in discussing Russell's neutral monism, seems to hold a similar point of view, asking "Does it make sense, even, to speak of intrinsic qualities that, though in some sense continuous with the phenomenal, nevertheless do not literally figure as features of a "point of view", in Nagel's sense..." (1981, p.157)

²¹² What I do take as brute, I suppose, is that properties, in virtue of the nature they have, inform their bearers in a certain manner. But I do not see how any realist about properties can fail to take this as brute. It should be noted that this claim does not amount to the sort of brute emergence which Strawson finds objectionable—qualitativity and dispositionality do not emerge from properties.

Chalmers whilst it rode a roller-coaster,²¹³ too, despite the fact that there is nothing it would be like to be zombie-Chalmers riding a roller-coaster. None of this implies that there is something it is like to be the air rushing past the face of someone, zombie or no, riding on a roller coaster. Qualities, as Martin puts it:

[...]are the light of the world. They are *embedded* in the inner life of our minds. They are what we go over in our heads verbally and nonverbally, they embody the sensory richness of our dreaming and the very *feel* of our feelings. (2008, p.139)

Qualities are what experiences feature, are characterised and informed by: both the qualities of the very experience itself and the qualities of things experienced. But qualities, remember, are not fundamental. There are not properties that are best characterised as qualities, at the expense of dispositionality. That which accounts for qualitativity—the properties—also accounts for dispositionality. Thus dynamic interaction is built right into the ontological basis for qualitativity; just as intrinsic quality is built right into the ontological basis for dispositionality. The having of an inner life like that enjoyed by human beings requires qualitativity; for qualities are what inform, characterise and feature in this inner life. But this is not to say that every instance of qualitativity *is* just such an inner life. A particular kind of dynamic interactivity, a particular kind of *structure* will also be required. On the view of properties that I am proposing, this intimate relation between qualities and structures is to be expected, for in the neutral property itself, qualitativity and dispositionality are identical.²¹⁴

The position I am suggesting does not fall foul of Strawson's warnings about the magical nature of brute emergence. I am not sure the position suggested above should be considered a kind of emergence at all, but if it were to be read in that way, it certainly would not be brute emergence. Strawson insists that if experience arises from non-experience, there must be something about non-experience which makes it intelligible that experience so arises. If, as I am suggesting, the non-experiencing features of the world are dynamically-interactive-qualities-cum-intrinsically-qualitative-dispositions, then it does appear to me intelligible that some parts of reality enjoy inner lives like those enjoyed by

²¹³ Pretending, for a moment, that such a creature might be possible, and thus be able to take rides on roller-coasters.

²¹⁴ Chalmers (2003, p.132) sees the structuring of experience as posing a problem for neutral monism, on which view he suggests we ought to expect experience to be nothing but a "[...]jagged collection of phenomenal spikes". Perhaps this holds for something like the interpretation of Russellian monism to which Chalmers adheres, which reduces dispositionality to unknown intrinsic properties, but it does not have the same bite against my position.

human beings, and that other parts, nevertheless all made up of the same sort of stuff, do not. Indeed, I find this more intelligible than the idea that an inner life like my own could be composed out of some sort of collection of other inner lives, all independent of one another. This is less than argument against Strawson's view, but I hope it is enough to at least clearly demarcate my own position from his, and demonstrate that the version of neutral monism I am proposing is not a version of panpsychism, where this is taken to be the doctrine that inner lives relevantly similar to those enjoyed by human beings are ubiquitous.

Perhaps this interpretation of Strawson's panpsychism is too strong, and he means by 'the experiential' not an actual instance of experience relevantly similar to that enjoyed by human beings, but just something similar to what I mean by qualitativity. If so, then perhaps my position and his are in certain respects broadly in agreement: we both take qualitativity to be ubiquitous. However, if this is the case, I would question the idea that this position is 'panpsychist' in any sense which should raise the sort of alarm bells association with that doctrine usually does. We can call qualitativity intrinsically mental if we like, and on the back of this take the ubiquity of quality to indicate panpsychism, but this will not have the consequence that phenomenology is enjoyed throughout the universe.

12.8 Neutral Monism, the Limit View and Dualism

My version of neutral monism is clearly not property dualism, for it does not hold that (P) and (M) pick out two different kinds of property, between which some sort of genuine distinction obtains. In my discussions of the ontology of mind and body thus far, I have concentrated primarily on property dualism, which currently is the most popular form of pluralism. However, Lowe presents an alternative sort of dualism, what he calls 'Non-Cartesian Substance Dualism' (see for instance 2006). This position does not rely for support on the Conceivability or Knowledge arguments, against which I have argued in Chapters Eight and Nine of this thesis. Rather, on the basis of considering the different persistence conditions which apply to persons and their bodies, Lowe suggests that the two cannot be identified; the self must be a separate substance.²¹⁵ Due to restrictions on space, I cannot offer a full analysis of how the account of properties which I have proposed in this

²¹⁵ The view is labelled 'Non-Cartesian' as, in contrast to traditional conception of the Cartesian ego, it ascribes spatio-temporal properties to the self.

thesis and the version of neutral monism which I think is the natural extension of this account into the debate concerning the ontology of mind and body relates to this version of dualism. However, I would like to make some suggestive remarks. It seems that given the notion of genuine substantial emergence discussing in section 10.3 of this thesis, there may be space to accommodate Lowe's conclusions within a neutrally monist framework. Perhaps selves do emerge as separate substances from bodies, but if this emergence is mono-levelled, and the characteristic properties of the emergent substance, even if novel, are all neutral properties, then Lowe's arguments need not motivate a departure from the ontological framework proposed here.

12.9 Why be a neutral monist who accepts the Limit View?

Adopting the version of neutral monism I have proposed has a number of advantages. First, in general, neutral monism provides an elegant and parsimonious account of the relation between the physical and the mental. I have argued above that objections which are commonly raised to traditional versions of neutral monism, centring around the idea that the position is inherently unstable and inevitably collapses into one or the other of the more common accounts of the ontology of mind and body, do not apply to my version of neutral monism. Further to this, the specific account of neutral monism that I have proposed has the advantage of being able to accommodate intuitions and aspirations from both sides of the debate. It fulfils the physicalist goal of providing a unified and monistic account of the place of the mind in nature; and can also, through the interpretation of the distinction which obtains between disposition and quality for which I have argued, recognise the dualist intuition that there is some significant difference between mentality and physicality, without being forced to the conclusion that this compels us to posit two distinct kinds of property at a fundamental, ontological level. It can also provide insight into why it is that finding the place of the mind in nature has seemed to pose such a difficult challenge; for as long as it was assumed that dispositionality and qualitativity were accounted for by fundamentally different kinds of property, it was natural to find difficulty in reconciling the causal-structural picture of the world provided by the physical sciences with the intrinsically qualitative nature of the manifest image. No other position current in the debate regarding the ontology of mind and body can claim all of these advantages; with the potential exception of Strawson's physicalist-panpsychism. The view I have proposed has the (what might be rather slim) advantage of being more intuitively plausible than Strawson's: the claim that the having of an inner life relevantly similar to that enjoyed by

human beings is ubiquitous throughout nature is either very hard to understand, or taken on face value seems somewhat implausible.

For those of a monistic mindset, as I have argued in Chapters Eight and Nine, the position which I favour can provide responses to powerful arguments in favour of property dualism such as the Knowledge Argument and the Argument from Conceivability. Furthermore, I have suggested it may be able to accommodate recent arguments in favour of substance dualism within a monistic framework.

A neutral monism of the sort that I have proposed, which conceives of the neutral entities as properties which can be conceived of as dynamically-interactive-qualities-cum-intrinsically-qualitative-dispositions, looks, *prima facie*, to have the potential to make some headway with questions concerning mental causation. Given that it treats the mental and the physical as on a par, ontologically speaking, the initial source of the problem—the question of how *this* mental sort of stuff could interact with *that* very different physical sort of stuff—loses its motivating power. However, there are more nuanced versions of the problem, such as that which is sometime raised against Davidson's anomalous monism (1970). Davidson suggests that all events are physical events, in virtue of answering to physical descriptions, but some events are also mental events, in virtue of answering to a mental description. As these mental events just are physical events, the initial question concerning mental causation does not arise. However, the problem of mental causation has been raised for Davidson's view in another form: even if some mental events are physical events, and so it is not problematic to see how those very events can engage in causal interaction, it is hard to see how they could do so *qua being mental events*. (See, for instance, Heil (2013) for a discussion of Davidson's view and the problem of mental causation). I think that this problem can be avoided on my account. It is not the case, on the account proposed here, that the real properties do some things *qua being a (P) property* and some *qua being an (M) property*. Given the identity thesis, it does not even make sense to talk in terms of what a property does *qua being a disposition* and *qua being a quality*. To talk in these terms is treat properties as having a somehow dual or compound nature, to adopt something akin to a mereological conception of the Limit View. This is an interpretation I have argued against (see Chapter Three). If it does not make sense to talk about a real property *qua being a disposition* or a *quality*, it does not make sense to ask about its role *qua physical* or *mental*, and so this version of the problem of mental

causation simply does not arise.²¹⁶ Much more needs to be said on this topic, but there is not the space for such discussion here. I hope I have said enough to at least motivate the claim that the position I am proposing may have interesting and potentially useful applications in the context of the debate concerning mental causation.

A full understanding of the consequences and applications of the view which I have proposed would require a much deeper exploration than there has been space to conduct here. Having provided a framework for a unified view of the ontology of mind and body, which stems primarily from metaphysical as opposed to epistemological principles, which can accommodate a wide variety of intuitions and theoretical aspirations, avoid major criticism associated with neutral monism in general and which looks to have interesting applications for the mental causation debate, is, I hope, enough to convince the reader that it is a position which at the very least merits serious consideration.

²¹⁶ At least, not where the 'qua' here is supposed to carry any ontological bite. We could consider or conceive of a property, through an act of abstraction, qua being a pure disposition or a pure quality, but nowhere is this realised in nature.

Conclusion

In the first half of this thesis I advanced an interpretation of the Limit View account of properties, first proposed by C. B. Martin. According to the Limit View, the distinction traditionally taken to obtain between dispositional and categorical or qualitative properties is not realised in reality. Rather, the Limit View takes all real properties to contribute to both the qualitative and the dispositional nature of the substances which instantiate them. That properties are apt to do so is explained by the surprising identity thesis: dispositions are identical to qualities, and indeed both are identical to the simple, unitary property itself.

The central aim of the interpretation advanced in this thesis has been to address two difficulties which the position, as previously articulated, appears to face. First, both Armstrong and Lowe and have levelled a charge of obscurity at the Limit View, challenging the proponent of the position to explain just what it could mean for the dispositional and the qualitative to be identical to each other. Second, there is an inherent tension in the Limit View as presented by Martin: despite his adherence to the surprising identity thesis, Martin also insists that a distinction obtains between the dispositional and the qualitative that is more than 'in-the-eye-of-the-beholder'. *Prima facie*, these two positions look to be inconsistent. However, it is desirable that both be maintained, as responses to criticisms levelled by Armstrong and Molnar rely on them.

I have argued that the obscurity charge can be met, and the internal tension in the Limit View resolved, by paying close attention to the nature of both the identity claim and the distinctness claim. In doing so, I drew on the conceptual resources of the nuanced approach to the metaphysics of identity and distinctness found in the work of late-Scholastic philosopher Francisco Suárez, and of recent research concerning multi-categorical ontology. That properties can be such that both (i) the dispositional is identical with the qualitative, and (ii) there is, nevertheless, a distinction which is more than 'in-the-eye-of-the-beholder' between the dispositional and qualitative can be understood if one interprets the distinction posited in (ii) as a distinction of reason—a distinction which, whilst it is not a real distinction between thing and thing, finds some grounding, license or foundation in reality, and so is not *merely* a mental or conceptual distinction.

In the second half of this thesis, I examined how the interpretation of the Limit View advanced in the first half could be applied to the debate concerning the ontology of

mind and body. I have shown that if one adopts this version of the Limit View, one is able to offer novel responses to two powerful arguments against physicalism, and in favour of property dualism: the Argument from Conceivability and the Knowledge Argument, making the Limit View an attractive position to any philosopher of a broadly monistic mindset.

Following this, I engaged in an investigation of how the notions of 'physical' and 'mental' are best characterised, arguing that dispositionality plays a central role in our concept of physicality; and qualitativity in our notion of mentality.

Making use of these characterisations, in the final chapter of this thesis, I presented a sketch of a new variant of neutral monism; I have argued that this is the position that should be adopted if one accepts the interpretation of the Limit View advanced earlier in the thesis. This version of neutral monism departs from the radical empiricist stance which is historically associated with the view. Rather than adopting this epistemologically driven approach, and considering the neutral entities to be that which is given in experience, I argue, based on the ontological considerations outlined earlier in the thesis, that properties as conceived under my interpretation of the Limit View are natural candidates for playing the role of the neutral entities. In addition, I provide arguments to support the claim that the version of neutral monism I propose is a genuinely distinct, novel position, which does not collapse into either other forms of monism (physicalism, idealism etc.) or some form of dualism or dual-aspect theory; nor does it entail panpsychism.

The material in the final chapter is suggestive of a number of avenues of future research. First, in unifying mind and body, ontologically speaking, the version of neutral monism I have outlined precludes the problem of mental causation being motivated through an appeal to the apparent radical difference between mentality and physicality. Investigating, from this starting point, how a detailed theory of psycho-physical causation could be formulated, would be a valuable contribution to the contemporary mental causation debate. Secondly, uniting the dispositional with the qualitative, and conceiving of all reality as characterised by dynamically-interactive-qualities-cum-intrinsically-qualitative-dispositions, may open up interesting avenues for research in the philosophy of perception; especially concerning phenomena such as illusion, hallucination and perceptual representation.

Given the interpretation advanced in this thesis, the Limit View can meet the challenges raised by Armstrong and Lowe, and is, despite apparent internal tensions, consistent. Not only is the position consistent, but it is an attractive and exciting one: for,

as I have argued, it appears to have the potential to open up new ways of thinking about difficult and entrenched problems in the philosophy of mind, especially those concerning the ontology of mind and body.

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